

A N
A C C O U N T
OF THE
M E T H O D S
PURSUED IN THE TREATMENT OF
C A N C E R O U S
AND
SCHIRRHOUS DISORDERS,
AND OTHER INDURATIONS.

By J. O. JUSTAMOND, F. R. S.

AND SURGEON TO THE
WESTMINSTER HOSPITAL.

L O N D O N :

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MDCCLXXX.

We should consider further, that to set limits to nature, to know with certainty that any particular disorder is incurable, exceeds the bounds of human faculties. It is, therefore, our duty, that is, the duty of those who cultivate the study of medicine, never to suffer hope to be totally extinguished; because the extinction of hope, is the extinction of endeavour.

Doctor Musgrave's Gullstonian Lectures, p. 86—87.

TO THE
M A S T E R,
W A R D E N S,
C O U R T O F A S S I S T A N T S,
AND THE REST OF THE
C O M P A N Y O F S U R G E O N S.

GENTLEMEN,

THE following sheets are published at this time, in order to obviate any objections arising from an idea of my concealing a part of my practice; and they are addressed to you, because if my professional conduct in any respect requires an apology, it is to you collectively that I owe it.

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iv DEDICATION.

It has long been my wish to make this communication; and the only reason of the delay, so far as it hath been voluntary on my part, was the hope of being able to offer from repeated experience a mode of practice of approved utility in cancerous disorders. At the same time it is proper to mention, that whenever a physician or surgeon was called in to consult with me, I always made it a rule to explain the methods I had pursued.

The state in which this publication appears before you at present, falls very short of what I once expected; but I have no doubt of your receiving it with that candour, which

DEDICATION.

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which belongs to the members of a liberal profession; and shall be happy in your approbation of my endeavours to shew myself a useful member of your society.

I am, Gentlemen,

With the greatest respect,

Your most obedient and

most humble servant,

Piccadilly.

Dec. 1, 1779.

J. O. JUSTAMOND.

E R R A T A.

Page 5, line 19, Yateman, *read* Yatman; page 11, line last, *efs*, *read* less; p. 12, line 2, ameliorated, *read* meliorated; p. 57, line 9, insert a, after *slack*; p. 67, line 11, of the note, *albæ*, *read* alba; page 87, line 13, zine, *read* zinc; page 87, line 16, after *that*, insert *it*; page 94, line 16, I imagined, *read* As I imagined; page 111, line 19, *hasted*, *read* induced; page 116, line 10, *extract*, *read* dissolve; page 161, line 2, insert a comma after *pain*; page 167, line 12, *point*, *read* pint.

A N
A C C O U N T
O F T H E
M E T H O D S
PURSUED IN THE TREATMENT
O F
C A N C E R O U S
A N D
SCHIRRHIOUS DISORDERS, &c.

IN giving this account, the following order will be observed. I shall first speak of ulcerated cancers, and the various applications I have used to them; under which head will be included the treatment of cancers of the womb.

The second part will be taken up in the consideration of schirrhous tumours, in which will be inserted those cases that were merely

schirrhous tumours, or occult cancers, when they first came under my notice, and which afterwards became ulcerated.

The third part will contain observations on what is commonly called the milk breast, or the coagulation of milk, and the consequent formation of matter in the breasts of women after lying-in, with the account of a peculiar method of treating these complaints.

It would be tiresome and unnecessary to give a description of every case that has been under my care; my design being only to make a full communication of every external application I have used; and of every internal medicine I have given, with the general result of the effects; and to note the peculiar observations which experience has led me to make, in the number of these cases that have fallen under my notice. Those cases therefore shall be selected in which the methods have been varied; or the detail of
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which may appear to afford some lights that may possibly be of advantage to others.

But as I am convinced that more useful information is frequently to be derived from a candid avowal of our errors, than from the display of our best successes, I shall be particularly careful not to omit any instance, in which I could have the least suspicion of any fatal or dangerous symptom having arisen, from the properties of any application or medicine employed. This may at least save other practitioners the time and trouble of pursuing the same track; and if it cannot tell us what to do, will at least teach us what we are to avoid: a knowledge, in many cases, and particularly in desperate ones, next in utility to the former. I shall only observe, that the instances in which such accidents have happened, are extremely few in comparison of the great number of patients with whom the same methods have been followed.

In the year 1770, a lady applied to me with a cancerous complaint of a very malignant nature. She had been afflicted with it upwards of thirteen years. It had originally consisted of two schirrhous tumours, which had been removed about three years before she applied to me, by Mr. Guy's method. That gentleman was never able to close the wound entirely; and though the lady remained tolerably well for some time after the removal of the tumours, yet there was a little crack subsisting which furnished occasionally a greater or less quantity of discharge. Mr. Guy dying some time after this, and the patient growing worse, she applied to his son from whom she received no benefit. She afterwards shewed the part to several eminent surgeons, who all advised her to do nothing to it, except to keep the wound clean. When I first saw her, the appearances were as follow. One large, oblong, pale, ill-conditioned, sloughy wound in the middle,

middle, extending nearly throughout the whole of the scar formed by the previous application of Mr. Guy's caustic. This wound surrounded by several smaller, some near, some at a distance from the larger one, and all discharging an ichorous acrimonious fluid, which frequently inflamed and excoriated the parts on which it fell, and thus produced other wounds. The edges of the wounds were tucked in, and those of the large one in particular, extremely indurated. From the most external border of the large wound there arose a kind of cord of considerable hardness and bulk, which extended quite into the armpit, occasioned pain and sometimes a degree of swelling in the arm on that side, and rendered the operation impracticable. Mr. Falwasser, surgeon and apothecary at Maidenhead, and Mr. Yateman, apothecary in Percy-street, Rathbone-place, were both witnesses of the case and the result of it.

This I considered as a fair case to make trial of the hemlock bath, which I was induced to do from an account of its success I had met with some years before written in the German language, and which I translated and published in London a short time after my return from that country. I had already recommended this bath to some poor persons who applied to me in the course of a few years with cancerous complaints ; but though I offered them to defray the expences of the apparatus and the plant for them, yet I could induce very few to try it ; and those who did use it two or three times, could not be prevailed upon to continue it long enough to find any effect from it ; alledging, that it was a method too troublesome for them and their families. On the other hand, the hemlock was fallen into such general discredit among the faculty in England, and they were so particularly prejudiced against any thing that had the name of coming from Germany,

that

that I could not prevail upon any of my medical friends to try this new mode of introducing it into the habit.

I resolved however not to propose this bath to my patient at first, in order not to alarm her ; but to give a fair trial to the internal use of the extract of hemlock, and the external application of the plant in pultices and fomentations. She persisted for a long time, and the dose of the extract was gradually increased as far as it could be borne, but without any visible effect, except a trifling alteration for the better upon the first trial of it, or upon the first varying of these applications for some other. A year and a half or more passed away in this manner, during which time she tried the extract of hemlock, the bark, the sublimate, the carrot pultice, and many other things without obtaining any relief. On the contrary, she grew visibly worse. Long continuance of excruciating pain had reduced her to an extreme

degree of weakness and emaciation. Her countenance was become quite livid. The disease was much advanced in its progress, both with respect to the number and condition of the sores, and the extent and size of the indurations. Such in a word was her state in the month of December, 1771, that her family justly apprehended it would not be long before they should be deprived of a valuable relation and friend.

I had frequently taken the opportunity of endeavouring to persuade my patient to try the hemlock bath, but all my expostulations to this purpose were unavailing; so that chagrined at the inefficacy of all the methods pursued, I had lately been revolving in my mind a design of trying the outward application of salt ammoniac, which I had always considered as a substance of powerful resolutive properties, and of course as a very useful topic in all indurations. I could not however readily determine upon the mode
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of using it in these cases, and in this dilemma communicated my ideas to Doctor Morris, in hopes that his well-known abilities in chymistry might assist me in settling this point. Upon my mentioning the salt ammoniac to him, he informed me that there was an account just published in one of the German Ephemerides, of a chymical preparation, used with success in cancerous cases, in which that medicine was a principal ingredient. I procured the account, and found that the medicine was a tincture of equal parts of salt ammoniac and iron in rectified spirit of wine, with the addition of oil of vitriol, and oil of tartar, and directions were given for applying it. The exact mode of preparing it shall be mentioned at the end of this section. At present let it suffice to say, that I resolved to try it, and accordingly desired the favour of Doctor Morris to prepare it for me.

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The liquid being ready, I began using it, as directed, in the following manner. I dipped a small pencil brush into it, and smeared all the edges of the sores, and every part that was indurated with it, taking all possible care that the liquid should not run down into the ulcers themselves. The part besmeared was then suffered to dry; the wounds were covered with dry lint, and the edges with the same. It being scarce possible to prevent some of the liquid, which was extremely sharp, from insinuating itself into the sores, there was generally a degree of smart accompanying the dressing, but this soon subsided. My patient was directed to repeat this application of the liquid to the edges, and to all the indurated parts two or three times a day, or as often as she could bear it. Finding in a little while that there was a visible alteration for the better, I ventured to use the liquid more freely, and after having smeared all the indurated parts as before,

fore,

fore, dipt in it some pieces of lint or rag doubled, and layed them wet all over the edges and indurations. By this contrivance the liquid remained active upon the parts for a much more considerable space of time, and the patient had nothing more to do, than with the pencil brush to soak the lint again as often as it became dry, or as she could support the smart. When it appeared that the liquid produced an alteration in the edges and indurated parts, I resolved to wash the ulcers themselves with it, lowering it for this purpose with water, and trying the mixture upon my tongue, 'till I judged that it was sufficiently mild. When it happened that the edges were inflamed or excoriated by the frequent use of this sharp liquid, it was suspended 'till they were recovered, which they generally were in four and twenty hours. In this manner I proceeded for about three months, at the expiration of which time the pain of the disease was less, the edges and indurations

indurations began to soften, and the discharge from the fores was ameliorated.

Notwithstanding these favourable appearances, I observed with much chagrin, that although my patient being freer from pain, was rather better in health, than when this process was first entered upon, yet the amendment in this particular was not nearly so evident as in the others. This was a material circumstance to attend to. But in what manner was this amendment to be brought about? All the ordinary remedies given as alteratives, or with an intent to restore the exhausted strength of the body, had been already administered in vain. Reflecting then upon the good effects produced by the liquid applied externally, it seemed probable to me, that a medicine of a similar nature might be given internally with some prospect of success. The flores martiales occurred as the preparation the nearest to it, and I was the more induced to try it in this instance from

from considering the invigorating power of the iron contained in it. Accordingly, it was made up into pills with a solution of gum arabic, each pill containing three grains of the medicine, of which the patient took at first two in the day. Five grains of the flores martiales were soon after put into each pill, and the dose gradually increased, till twelve of these last pills were taken in the course of the day. When this method had been continued six weeks, my patient's health was visibly mended, her complexion cleared, and her strength much recovered. Encouraged by these promising appearances, and finding that the medicine did not disagree, the dose of the martial flowers was increased to ten grains in each pill, of which pills from twelve to twenty were taken in the day. The only inconvenience ever experienced from this, was, a little sickness at stomach now and then, which was easily removed by a tea spoonful of brandy, or some warm wine,

wine, and which might perhaps be as much
 owing to the swallowing of a number of pills
 in the day, as to any effect of the medicine.
 It is to be observed, that upon an average my
 patient may be said to have taken between
 two and three drachms of the martial flowers
 every day, for a long continuance, without
 inconvenience. A few of my cancerous pa-
 tients have since taken from three drachms to
 half an ounce of the same medicine in the
 same space of time, and likewise without in-
 convenience; though it must be acknow-
 ledged, that this medicine, as well as others,
 can be borne in much larger quantities by
 some stomachs than others: so that upon
 the whole, whether the pills are made with
 five or ten grains of the medicine, it may be
 as well to restrain the dose to about two
 drachms in the day, which from experience
 I am inclined to think, will not disagree with
 any patient. And even this, is an almost in-
 credible

credible dose, when we consider how seldom this medicine has been prescribed, and when it has, how sparingly.

In the course of this work, we shall have occasion to observe the utility of this enlarged dose of the martial flowers, in a disease very common among women, which frequently baffles all the skill of the physician, and which has been generally considered as one of the principal causes of sterility.

In three or four months after the giving of this medicine, that is about seven months (*wubo*) after the first application of the liquid, my patient was so much mended in every respect, that I began to entertain hopes of effecting a complete cure. The internal use of this invigorating medicine had so far restored her health, that she appeared like a new creature. The pain of the disease was almost entirely subdued, the indurations were all of them considerably softened, and in some places

places totally resolved. The cord under the arm-pit was much lessened. The large wound was contracted, and some of the small ones, closed: the discharge from them was generally good.

But the appearance of the sores was still not so satisfactory to me, as the changes produced in other circumstances; and I soon grew sensible that there wanted some other application to them. Though some of the small wounds were healed, yet they broke out again, and this fresh ulceration was always attended with pain, and brought on at first an ichorous and acrimonious discharge. The sores in general were now tolerably clear and free from sloughs, but the surface of them was rather reticulated than granulating; and when touched ever so slightly, their sensibility was so exquisite, that it was evident they were still in a fungous or cancerous state, and not yet disposed to heal properly.

perly *. The common caustics had scarce any effect upon them ; neither did there appear any permanent advantage from touching them occasionally with the liquid unmixed with water. Encouraged however by the progress already made, and unwilling to have such fair prospects blasted, I resolved to try the effect of arsenic applied to the sores. I was aware that the fatal symptoms brought on by an indiscreet use of this medicine, had induced many eminent and learned men to reprobate it entirely ; while others, it must be acknowledged, of equal repute, affirmed, that it was of infinite

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* I have frequently observed that this appearance of net-work upon the surface of any sore, argued an uncommon degree of sensibility. Perhaps this may be owing to the denudation of some small nervous filaments, and their being affected by the acrimony of the discharge. The balsamic quality of good pus from a fair wound, may possibly sheath these filaments, and contribute to remove this extreme soreness, which is known always to be an indication of the fungous or morbid state of a wound.

service in cancerous affections. Sensible at the same time that this application would necessarily occasion pain, it was my desire to find out the least painful method of using it. In this view, it occurred to me that if it were possible to make a preparation of it, that should act immediately upon touching the sore as the lunar caustic does, that the pain however sharp at first would not be of long duration *. This idea was communicated to Doctor Morris, who was desired, if possible, to make such a preparation. The Doctor told me he had a preparation of arsenic by him, the effect of which he could not

* I was mistaking in this, for I have since had such a preparation made, and am convinced by experience that it cannot be used. The action of the arsenical salts is naturally very painful, though slow; but when they are exalted to their highest degree of activity, the pain they give only by a momentary touch is totally insupportable. They are worse than actual cautery, inasmuch as they seem to be equally acute at the instant, and that the pain continues in all its first violence long after their action has ceased.

not take upon him to ascertain, but believed, that it would be milder than the crude mineral. It consisted of equal parts of arsenic, copper, tin and mercury, distilled in spirit of wine, and afterwards in oil of vitriol. As it was agreed between us, that the action of the arsenical salt would rather be lowered than exalted by this combination and process, I determined to try this preparation. Though I had gathered from reading, as well as general report, that the arsenic must have been used externally in pretty considerable quantities for the cure of cancerous complaints, and that with success, yet I was resolved to proceed with all possible caution in my trial of a medicine, of the effects of which I had not yet been an eye-witness. I therefore reduced the mass Doctor Morris gave me into impalpable powder, took as small a particle of it as I could possibly separate, and laid it on the middle of one of the smallest sores, the size of which did not exceed that

of a six-pence. I staid with my patient a considerable time to watch the effect of this first trial, and returned in the evening to inquire what degree of pain she had felt, intending, if it had been violent, or still continued, to prescribe her some opiate to appease it. But although she had felt the action of the medicine, yet the portion of it was so small, that the pain had been very tolerable. When the part was dressed next-day, it appeared, that an eschar was produced, which had extended itself beyond the point where the powder had been applied. In order to ascertain the effect of this topic, it was necessary, that the eschar should be made to spread quite over the surface of the sore, and therefore I contrived to bring this about gradually, by a repeated application of the powder in small quantities, sometimes with more, sometimes with less pain. It was my wish to observe what alteration would be made upon this little sore, after the separation

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tion of the eschar, before the powder were applied to the other ulcers, that my patient might be preserved from any further unnecessary pain, if it should be found not to succeed in this first trial. The experiment was carried on so slowly and with so much caution, that a few days elapsed, before the eschar had pervaded the whole surface of the fore. It was soon thrown off, not being deep, and in a few days after this, I had the satisfaction to find the little ulcer perfectly cicatrized. In the mean while it was observed with pleasure that the case continued mending in every other particular. This course was therefore steadfastly persevered in; the liquid was used outwardly to all the indurated parts, the martial flowers were taken inwardly in as large a dose as they could be borne, and the arsenical powder was applied at different intervals to all the sores, in greater or less quantity, as it was judged necessary to make the eschar more or less

deep. Some of the ulcers were very obstinate, and it became necessary to renew the application of the powder to them, after the separation of the first, sometimes of the second, and even of the third eschar. It may be presumed that the patient underwent a great deal of pain in the course of this treatment. It must be owned she did; and my attention was chiefly engaged in devising methods to give the least pain it was possible to give, and to alleviate it whenever it rose to any degree of violence. This did not happen often, and when it did, it was found, that the external application of an anodine fomentation composed of twelve poppy heads bruised, and boiled in little more than a quart of water, till reduced to a quart, was much more effectual than the internal use of opium, which at the same time however was not neglected. The warm bath proved also of great service in this particular. By thus steadfastly persevering, success was at length obtained,

obtained, and in the month of March, 1773, about fifteen months after the first application of the liquid, the wound was compleatly cicatrized. The schirrhous parcel under the arm-pit was dissolved, and that in the literal sense of the word, for no wound had been made upon it, no caustic applied to it, and there remained only a slender cord like a thin piece of packthread, which seemed but to indicate where the great hardness had been. The indurated edges were also entirely softened, except the anterior edge of the sore next the sternum, where there was still a knob about the bigness of a large pea. My patient felt not the least pain, and had not felt any for some time past; and her health was so perfectly restored, that she now appeared several years younger than she had done in the year 1771. I would fain have persuaded her to suffer me to make a little wound upon the knob still conspicuous at the anterior edge of the sore, in order to destroy it by

the arsenical powder, but the satisfaction of finding herself in a perfect state of health, after having languished so long under such a painful distemper, and the dread of renewing her former pain, prevented her from consenting to this proposal. She was then advised to continue the application of the liquid to the line under the arm-pit, and to the little knob aforementioned; upon a presumption that in time these remains of the disease, if they could be called so, would be removed by this precaution; but she was so perfectly satisfied with her present state, that even in this particular she neglected to follow my advice. About six months after the healing of the wound, she sent for me, having scratched the cicatrix with a pin. The scratch bled a little, and was about two inches in length. She was exceedingly alarmed lest this unfortunate accident might destroy the happy effect that had been produced with so much difficulty. Upon examining the

the part with attention, it appeared however that the small line remaining under the armpit at the period of the healing of the wound, though nothing had been done to it, was now entirely dissolved, so that there was not the least trace of the large induration that has been described in this part, and it was even impossible to distinguish where it had formerly been. My patient was desired to take notice of this favourable circumstance, which contributed to quiet her fears, and to convince her that the disease was now so effectually subdued, that the little accident would not be attended with any consequences. No other application was made to the scratch, than some white cerate spread as thinly as possible upon lint ; with which we had the satisfaction to find that it healed in a few days.

Such was the case and the event of it, upon which my hopes of having discovered a method

thod of curing cancerous affections, were first founded.

Many of my brethren in the profession saw this case, and although their unanimous opinion was, that it was a very extraordinary one; yet the knob remaining at the anterior edge of the fore, made them conclude in general that the virus was not totally eradicated. Doctor Wathen's expression after having seen it in the year 1776, above three years after the healing of the wound, occurs particularly to me. He said, *it was all but cured*; but so well satisfied was he of the benefit received, that he desired a lady who had come from the country to consult him in a similar complaint, to put herself under my care. I shall not enter into a discussion of this opinion that the cure was not completed, though contrary to mine, but shall state facts as they happened, and leave my readers to form their own conclusions. It must only be observed, that from the time of
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the wound being healed, till the middle of the year 1777, that is, near four years and a half, my patient remained free from any kind of complaint in the breast, except a scab which now and then formed on this knob, and fell off of itself. In other respects she was perfectly well, had not any excoriation or discharge from the part, and felt not the least pain: her health too continued firmly established.

About Whitsuntide, 1777, as she was going into a ship's boat, the board being wet, her foot slipped, and her son, who held her under the arm, raising her up and extending it suddenly, to save her, she immediately felt great pain on the scar of the breast. A few days after this the scar broke out, and there appeared a wound about an inch in length. She complained of a good deal of pain at times, but her health was good, great part of the cicatrix remained entire, and there was not yet the least appearance

pearance of that hard thick cord that formerly extended itself towards the arm pit. This was the state of the case about autumn, 1777; I had not an opportunity of attending it after.

The same method was afterwards pursued in some of the other cancerous cases, and though the first changes produced were satisfactory, yet the event did not turn out so favourably. This led me to recur to my former resolution of trying the hemlock bath. It appeared at first that this bath kept the disease under, if it did nothing more; and finding that it was attended with no ill consequence, the quantity of the plant used in each bath was gradually increased from twelve, to twenty, and thirty, pounds weight, and upwards. This quantity was always regulated by the season of the year in which the plant was gathered. If it was in its full vigour it was not necessary to use more than twenty or thirty pounds.

pounds. But it may not be improper to observe that, when I was obliged to employ the dried plant, a much smaller quantity of this was found equivalent, as it may naturally be supposed, to a much greater quantity of the recent herb.

Some of the first cases of ulcerated cancers in which I had an opportunity of trying the hemlock bath were in the Westminster hospital. It will be needless to tire the reader with descriptions of similar cases ; but I shall principally refer to two of these patients, because they lived the longest, and thereby enabled me more particularly to note the effects of the method. These two cases were of long standing, the patients advanced in years, and the appearances of such a nature, as not to afford any prospect of success from the use of the knife. In both these instances the first effects of the hemlock bath used with a large quantity of the plant were the same. A high symptomatic fever ensued,

ensued, attended with rigors, great increase of pain, and every symptom of an advancing suppuration. I was not alarmed by these symptoms, and endeavoured, not only to quiet the apprehensions of my patients, but also to mitigate their sufferings as much as possible. In a short time the suppuration was far advanced, and affected not only the ulcerations, but extended also to every part that seemed tainted with the disease, which soon came away in large sloughs accompanied with a great abundance of matter. The pain my patients already suffered, and the extreme sensibility of the parts, hindered me from using any dressing but dry lint or soft Goulard cerate to the edges; for to save the fatigue of long dressing, even the application of my liquid was omitted. To say the truth, I flattered myself, from all the appearances, that nothing more was wanting than a little attention to complete the cure. The first of these patients, Elizabeth Williams,

Williams, admitted into the hospital on the 23d of September, 1773, soon recovered ease and strength, and in about three months from her admission, the ulcer was apparently reduced to the state of a simple wound, which every one imagined as well as I, would heal in a short time. She used to rise and walk about the ward in perfect ease, and to all appearances, in perfect health. She was, however, suddenly seized with a putrid fever which carried her off in a few days, at the end of about four months from her first admission into the hospital. All I shall observe on this circumstance is, that the illness was sudden and the issue of it speedy; and that during the little time it lasted, there was no pain complained of in the breast, nor was there any alteration in the favourable appearance of the sore and the parts surrounding it, though the cicatrix was never completely formed.

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In the other case, which was that of Mary Randall, a woman about 60 years of age, who was admitted into the hospital on the 15th of December, 1773, the event was different. After the large sloughs caused by the suppuration of the diseased parts were separated by the use of the hemlock bath, which happened in about three months, every thing went on well, though slowly, for a considerable time. My patient enjoyed ease and health for about six months. But the wound never healed kindly, and some disagreeable appearances began to shew themselves both in the fore and on the edges. I was convinced by other experience that the efficacy of the powder in the first case had been owing to the arsenic it contained, and as the other ingredients might possibly increase the pain without adding to the effect of the application, I determined to suppress them. Here I shall take the opportunity of returning my thanks to Mr. Cheston,

of

of Gloucester, for the many useful hints and communications he supplied me with in the course of our correspondence and conversations, respecting the external use of arsenic in this and other complaints where he had tried it with advantage. He advised me to flux arsenic and antimony together, either in equal parts or with two of antimony to one of arsenic, in the view by this combination to moderate the effect of the arsenic by the sulphur contained in the antimony. This last was the powder used in this case with great caution, and only a little at a time, taking care to use my liquid to all the edges and neighbouring parts, wherever fresh indurations were perceived to arise. An equal, and even a larger proportion of opium was afterwards added to this powder, by which I found its painful effect much diminished. All my endeavours, however, proved fruitless, the patient's pain increased,

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and she fell a victim to the disease, a year after her admission into the hospital.

Thus I continued treating many cases of ulcerated cancers in many parts of the body, varying these methods according to the different states of the disorders, and what appeared to me to be the constitution of the several patients, and with various success. Some were relieved at first, others I did little or no service to; and others again were nearly cured; the progress of their diseases evidently stopped, their lives preserved for a considerable time longer than in all human probability they would have been, and that too with tolerable comfort to themselves, of which there are some instances still living. But I never succeeded in healing any ulcerated cancer besides the first here described, by these methods nor others which shall be hereafter mentioned; except in the instance of one other cancer, which as it proceeded from another disease, and was treated in a
different

different manner, shall be introduced at the end of this account of the other methods I tried for the cure of ulcerated cancers, which are the only object of this part.

Though my first hopes were now cruelly frustrated in many instances, yet I could not but be convinced from the result of all my cases, that something more had been effected by these methods, than had been done by others, and as arsenic seemed to be the best application externally, I resolved, in the first obstinate case, to try it internally. I was the more induced to this from knowing that it had been administered by others, and from an account recently published, in which it was said that this medicine had been given with effect in cancerous complaints. I determined, however, to give it in my own way, and therefore weighed out a grain of arsenic, and mixing it thoroughly in a glass mortar with a scruple of testaceous powder, made it up into a mass of pills, with a small

quantity of syrop. This was divided into sixteen pills, made exactly equal, by carefully weighing them separately one against the other. These pills were always prepared by myself.

On the 5th of October, 1774, Ann Bond applied to me with a cancerous ulcer on the right side of the tongue about the size of a crown piece, surrounded with indurations, and very painful. She came into the hospital on the 18th of January, 1775. She was at first put into the hemlock bath, the flores martiales were administered internally, and the ulcer was smeared with a mixture containing one drachm of spirit of salt, five grains of arsenic, and twenty of opium, with a sufficient quantity of testaceous powder to make the whole into a consistence somewhat like that of mel ægyptiacum, a portion of which was likewise sometimes added to this mixture; and whenever any separation was likely to take place from
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the action of the arsenic and spirit of salt, the use of the mixture was suspended, and the mel ægyptiacum used alone. Sometimes the fore was merely washed with my liquid. When the mixture was used, the patient was directed to take particular care not to swallow any of her saliva for several hours after, and to wash the mouth with some of my liquid, lowered with water, before she swallowed her saliva, or took any food. The corrosive sublimate was soon after substituted to the martial flowers, as being judged from Doctor Akenfide's observations to be a medicine better adapted to this case. With this medicine internally, and the fore-mentioned applications externally, some advantages were gained; but the disorder still proving obstinate, I resolved at length to give the arsenic internally, beginning with the fixteenth part of a grain every day, and gradually and carefully increasing the dose till my patient took a grain in the day. This patient

could not bear much more than this quantity, for when she had taken a grain and a half for a few days, she was seized with tremors of the limbs. But another patient I had at the same time with a cancer in his face, who was a remarkably strong man, took two grains of it daily without finding any inconvenience from it. From the time of my using this medicine the appearances grew so favourable that I was in great hopes of completing the cure, and many other surgeons who saw the case with me, and had seen it in its worst state, were of the same opinion. But the obstinacy of the disease made me judge it necessary to increase the dose of arsenic, if my patient could bear it, and therefore I fused it with four times its weight of sulphur, with the view of tempering the violence of its action. I began with the same quantity mixed with sulphur that my patient had been used to take by itself, that is, a grain of arsenic in the day; and soon found that I could

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use it much more liberally in this way than before. For she soon took four and five grains of the mineral every day in this combination with sulphur, with less inconvenience than she took one grain and a quarter of the arsenic alone. But if the violence of this medicine was diminished by this combination, it soon became evident that its efficacy was likewise decreased by it; for the disorder seizing the tonsils and other glands about the neck and throat, the patient died in about ten months from her admission into the hospital.

This and the other case of a cancer in the face, were the only two cases in which a fair trial was given to the internal use of the arsenic. Encouraged by the fair prospects these trials afforded me at first, I had begun to give it to two other patients. But as the hopes I had entertained of its efficacy in the two first instances were afterwards disappointed; and that, however, promising the internal use of the arsenic might appear to me

in these complaints, it still seemed impracticable to give it in such doses as to insure success, I thought myself not justified in continuing or repeating the trial. I therefore would not suffer my other patients who had begun, to continue taking it; and from that time never prescribed any arsenic internally, judging that the advantages arising from it were not sufficient to compensate the risk. The ascertaining of this point appears to me to be a very essential, and, indeed, a very necessary circumstance, for if, from the boldness of some publications on the subject, others should be tempted, as I was, to make the experiment, in hopes of contributing to the relief of mankind in these terrible cases, they will probably be deterred from it by this fair exposition of the matter. At the same time I am inclined still to think, from all the observations I have been able to make, that arsenic is really the true antidote against this disease; but as its internal use is attended with

with great danger, and that every attempt to correct its noxious qualities, seems to lessen its efficacy, it is not probable that it can ever be given so as to produce a complete cure.

The other case of a cancer in the face alluded to above, in which a fair trial was given to the internal use of the arsenic, was that of Mr. Champness, a man of the most vigorous constitution I ever knew. He was 67 years of age when he applied to me, in August, 1773, and his complaint had then been of eight years standing. He had been for two years under the care of a skilful and eminent surgeon in this town, who, as he informed me himself, had very humanely taken a great deal of pains to do him service, though his attempts had not been attended with success: for the patient assured me that the disease had been constantly increasing since that time, and that its progress had been very rapid for the last fortnight before he addressed himself to me. When I saw him first, all that part of the face between

tween the edge of the os malæ and the ala of the nose on the left side was eaten away. The lower part of the ala of the left nostril was quite corroded, the lip separated from its adhesion to the gum, and almost destroyed on the left side. The small remaining part of the lip on this side was very hard, and the induration extended to the right side and up the right nostril. This patient, as I before observed, being of a remarkably strong habit of body, I had an opportunity of giving the arsenic its full trial with him, both externally and internally, and with such appearance of success, that in the beginning of the year 1775, all the sores had healed except one, and that was in so favourable a state, and my patient so free from pain, that I had scarce a doubt of completing the matter, and, indeed, told the gentleman who had before attended him of this expectation. But my hopes were again disappointed. The wound was never completely healed, and though the disorder re-
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mained very tolerable, and was kept from spreading for a twelvemonth after this, yet about the end of that time it began to break out again, 'till at length it reached the glands of his throat. Notwithstanding this, he lived 'till the latter part of the year 1778, and for the last year of his life, as I have been informed, in a very miserable state, having lost so much of his lip, jaw, and teeth, that it was with the greatest difficulty he could swallow any food. Though this patient persevered in the use of the arsenic for six months, in the dose before-mentioned, yet he never experienced the least inconvenience from it. He was in good health, and continued even his daily labour all the time he was taking it, and for a long while after he had left it off.

As I have hitherto only mentioned two methods in which I applied the arsenic externally in cancerous ulcers, to wit; the arsenical and metallic preparation used in the
first

first case, and the arsenic fused with antimony in other cases, I shall now communicate another method of using it, which I first tried on Mr. Champness, I mean, mixed with an equal quantity of sublimate. This hastened the action of the arsenical caustic considerably, and made a much larger eschar, nor did it appear to cause greater pain than was complained of when the arsenic was used alone. It must, however, be observed that a large share of opium was mixed with every caustic I applied, from which considerable advantages resulted, the pain being generally less in proportion to the quantity of opium employed.

While my thoughts were engaged on this subject I made frequent researches among the manuscripts of the Museum, in hopes of finding in them something relating to it. I communicated this circumstance to Doctor Morton, who being thoroughly acquainted with the manuscripts, might possibly give me
some

some leading information to assist me in my inquiries. He told me, that in the Harleian library he had seen a recipe called the Earl of Arundel's receipt for curing a cancer, which he imagined to be the same as that used by Mr. Guy. He was so obliging as to instruct me where to find it, and I shall here give it the reader just as I extracted it from the manuscript at the Museum.

The EARL of ARUNDEL's Receipt to
cure a Cancer.

The causticke powder.

Take one ounce of yellow arsenicke, and half an ounce of bole armoniack, mix them well together and make them into fine powder.

The glistering causticke powder.—

Take an ounce of yellow arsenicke, of red precipitate, and bole armoniacke of each ʒss.

The

The tart water.—

Take an ounce of white sublimate, halfe an ounce of red precipitate, beat these together very small, and put it into three pints of white wine vinegar, and boyle it neere to a quart, and when it is cold keepe in a glafs.

The red water.—

Take a lime stone or two about two pounds, boyle two gallons and a halfe of spring water out of a rock rising against the sunn, put the lime stones into an earthen pot, and then power the boyling water upon them. Cover all close and so let it stand a day and a night, then power of the clearest and throw away the bottome: then take of bolus verus, roch allum, white copperas, aloes ficotrina, and campher of each two ounces, beate and searse them fine and mix them well with the said cleare water, and let these all boyle together for an hower, then put it in a pot close stoped till it be cold, and then turn it

into

into a glafs bottle close ſtoped and uſe the cleareſt.

The green oyntment.—

Take lbifs of freſh hog's greaſe, ziii of venice turpentine, lbifs of roſin, half an ounce of verdigreaſe, beate the roſin and verdigreaſe together, put all together into a ſkillet, and boyle them till it comes to a ſalve, and ſtrayne it into a gallypot.

The uſe of the things.

Take ſome of the cauſticke powder and mix it with green oyntment, ſpread it thin upon a cloath the juſt bigneſs of the noli me tangere, and apply it thereunto, it muſt ly on eight or ten days till it falls off, and then apply one other till all the dead fleſh be ſpent.

The white tarte water is to be applyed to the noli me tangere, with a cloath diped in it, if occaſion require. Alſo it is good for a cancer in the noſe, ringworme, or for any dead fleſh.

The

nix The red water is to wash the eyes if bloud shot, or pir, and webb, also to preserve the sight; used either for any sore, to be used warme, and to be cast in with a syringe, if occasion.

The green oyntment is to be applied to the noli me tangere after the causticke hath done his working, to heall and draw. It is used also to draw any sore.

Be it knowne that I, Elisabeth Fellow, wife to Henry Fellow, black-smith, dwelling neere St. Laurence street, in Oiciter, do protest and vow, before God, that I have trewly and faithfully sett down and discovered in this note delivered by me to the Right Honorable the Earle of Arundell and Surrey, Earle Marshall of England, the whole full and perfect receipt and manner of cure of the noli me tangere, which my father used, and often caused me to make, by which he ordinarily did cure that malady. And I do hereby faithfully promise and swear not to
teach,

teach, give, or sell the said receipt at any time hereafter to any person or persons whatsoever, other than my owne children, in witness whereof I have set my marke, this 16th October, 1638.—

Elisabeth Fellow,
her g mark.—

Witness'd

Fred. Bently,
Adrian Medcalfe,
Philip Howard.

Extracted from Colepeper's adversaria.
Vol. XV. Q. R. Oxford library, Museum.

I have thought proper to give the whole of this extract, rude as it is, and though the *red water*, mentioned in it, be foreign to the subject. As soon as I had read this receipt, it appeared to me that it was not Mr. Guy's, because this application would not act through the cuticle, as I knew Mr. Guy's did. It could not therefore be used in schirrhous tumours that were not yet ulcerated, and was

peculiarly adapted as the receipt expresses to the *noli me tangere*, the name given to an ulcerated cancer on any part of the face, a disease of which it is well known that Lord Bolingbroke died after the application of Mr. Guy's caustic. I therefore prepared only the caustic powder, the tart water, and the green ointment, omitting the red water for the reason above-mentioned, and the glittering caustic powder, because in the detail of the use of the things, it was not mentioned what purpose that powder was designed for. With respect to the green ointment I had it prepared merely for the sake of complying with the receipt, not from any opinion of its utility, for I have already declared my aversion for every kind of greasy application in these cases; and the powder may as well be formed into a consistence with the yolk of an egg.

In January, 1775, a wealthy farmer of Suffex, aged 73, applied to me at the desire
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of Doctor Pepys. He had a *noli me tangere* on the right cheek : It came on about twenty years before with a small pimple, which was frequently shaved off by the razor. It increased gradually to the size of a pea, and grew very troublesome, being attended with a sharp pricking pain. In this situation he applied, about a twelvemonth before he came to me, to an apothecary in the country, who put some butter of antimony upon the part. Far from being helped by this, he grew gradually worse; and when I saw him, there was an ill-conditioned cancerous ulcer on his cheek about the size of a crown piece, and surrounded with edges, turned in and extremely hard. The induration at the upper part extended over great part of the os malæ, and nearly to the orbit. He felt a good deal of pricking darting pain in it at times.

As I had observed that the preparation of arsenic and antimony used by me in former cases had been much too slow in its action,

I determined in this instance to give a fair trial to this receipt of the Earl of Arundel's, upon a presumption that it would act more speedily and powerfully than the preparation I had used. Some of the caustic powder was therefore mixed with the green ointment, and applied, according to the directions, upon the whole extent of the *noli me tangere*. This acted strongly, and in about a month after, the whole of the diseased part to which it had been applied, came away. But some of the hardneſſes beyond the ulcer where the ſkin was not broken, and on which the caustic could not act, ſtill remained. The bottom of the ſore looked extremely well for a time, but I afterwards found that the ſurrounding indurations fed the diſorder. I endeavoured to get rid of theſe by applying my liquid to them, and by touching the diſeaſed granulations, wherever they were obſerved to riſe with the *tart water*, as directed in the receipt. The application of
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the caustic was likewise renewed several times to the ulcerated edges of the indurations, in hopes of destroying them gradually. By these means carefully and attentively pursued, I succeeded so far in about five months as to subdue most of the disease, and very nearly to consolidate the wound. There remained, however, still something to be done, which I had the greatest reason to hope would have been accomplished, because all the parts before treated had gradually yielded to the method. I used every argument in my power to persuade my patient to stay longer under my care ; but the attendance had already been tedious, and he was of an unquiet restless disposition, and withal very uneasy at being so long absent from his family and his affairs, so that it was impossible to prevail upon him. His son, however, who was a surgeon in the country near him, came to town ; and I supplied him with all the medicines, giving him as clear directions

as I possibly could, for the occasional application of them. Whether these were closely followed I cannot take upon me to say, but am inclined to think they were not, for the old gentleman was wearied, and I should suppose not disposed to follow the method any longer. Whether this were the case, or whether the disorder would have been equally incurable whatever method had been pursued, I cannot take upon me to contend. So far is certain, that some months after, the patient returned to town, and put himself under the care of a quack, who reduced him so much in a short time, without doing any service to the complaint, that he was very near dying from mere faintness and debility. He then had once more recourse to me, and I scarce knew him again on account of his being so much altered from the hearty strong man I had before seen him. Though the disorder was worse than when he had quitted me, yet it was by no means arrived to any dangerous height,

height, nor was it near so much advanced, nor in so bad a state as when he first put himself under my care. But he was now too much harraffed both in body and mind with what he had gone through to think of submitting again to painful dressings; so that I now resolved to try the effect of fixed air upon the part, which I was informed had been tried with success in these cases by an ingenious gentleman in the profession. This application was continued for some time, and it appeared to keep the wound clean, and the part tolerably free from pain. But as he was again anxious to return into the country, I furnished him with the apparatus for continuing to apply it himself. I was informed, to the best of my remembrance, that he persevered in it till the time of his death, but without its producing any particular effect on the disease.

Since I have had occasion to mention the application of fixed air in these complaints,

and that great expectations have been raised amongst philosophers of the present age from the introduction of this newly discovered remedy into practice, I shall take this opportunity of communicating what has passed under my observation respecting the use of it in these disorders.

I have tried it in several cases of ulcerated cancers for a considerable time ; and pursued the following method in applying it. I first adapted an open bladder to the end of a flexible tube of a convenient length, and placing this bladder upon the sound parts round the cancerous complaint, so as carefully to include the whole of the disease, I confined the margin of the bladder by applying to it a piece of sheet lead, which was held close to the surrounding parts by one or more assistants. The end of the tube was then fixed into the mouth of a pretty large bottle, into which small pieces of marble had been put to a fourth part of its height, and the
bottle

bottle itself about half filled with water. A quantity of oil of vitriol being then poured into the bottle, an effervescence was raised, which driving the vapour rapidly through the tube, inflated the bladder. The fixed air being thus conveyed to the wound was kept there for half an hour, or an hour at a time, as long as the patient could bear the process. If the bladder grew slack the effervescence was raised afresh by shaking the bottle, or adding more oil of vitriol to the marble *. This application was renewed twice or three times in the day, and if I could have prevailed upon my patients to do it oftener, I would; being of opinion, that if any success were to be expected from it, it must be owing to its being reiterated frequently. I imagined, indeed, that if it had been possible

* Perhaps this detail may be deemed unnecessary, considering how well the method of producing fixed air is known. But I thought it proper to particularize the mode in which I used it, that it might be determined whether my want of success were owing to this.

to keep the part constantly immersed in fixed air, without any communication with the external air, this would be the most likely method of insuring success. However this may be, in all the cases wherein I tried it, it did not by any means confirm those expectations that report had raised in me of its utility. It never in any one instance disposed the cancerous wound or any part of it to heal; and all the benefit I experienced from the use of it, was, keeping the wound sweet and clean. This indeed is no inconsiderable advantage, where these effects cannot be brought about by other means, less inconvenient than this. Neither can I ascertain whether it contributed in any remarkable degree to abate the pain of the disease, for all the cases I tried it in were very far advanced, and the patients having been used to obtain relief from opium, did not chuse to relinquish a medicine, the good effects of which they had felt.

Let us now consider in what view the application of fixed air has been tried in cancerous affections. Except in some late instances where from Doctor Hales's hints it has been ingeniously suggested to be a dissolvent of the human calculus, the only principle upon which it hath been used in the disorders of the animal œconomy, is that of its resisting putrefaction. From Sir John Pringle's curious experiments on putrid animal substances, which together with those of Doctor Black on the nature of calcareous earths, were the basis of all the experiments since made by Doctor Macbride, Doctor Priestley, and others, and the doctrines established in consequence of them, it appears, indeed, that fixed air, both as an internal medicine, and as a topic, is likely to become very beneficial in all putrid diseases. But what effect are we to expect from it when applied upon this principle to cancerous complaints? A cancer cannot surely be called a putrid disease, for
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the symptoms and appearances that attend it, are directly contrary to those in which we find the putrid diathesis prevailing in the machine, such as scurvy, putrid fevers, &c. In all putrid diseases the solids of the body are softened and relaxed; in cancers, those parts that are affected with them are bound by the most rigid hardneſſes. In putrid diseases the solids become flabby and much increased in bulk, unable to reſiſt the impulse of the fluids; in the true cancer, the parts are all contracted into a narrow compaſs, puckered up and drawn in, ſo that if a woman have one breſt thoroughly affected with this diſeaſe, it will be much leſs in ſize and appearance than the other, even before any of its ſubſtance ſhall have been deſtroyed by the ulceration of the part. It will be urged perhaps that ulcerated cancers are generally accompanied with an extremely offensive ſmell, which indicates putreſcency. Not to inſiſt upon the circumſtance that an offensive
smell

smell is not always an indication of this quality, I shall only observe that the stench in these cases appears to be an adventitious symptom of the disease, it is the consequence of its ulcerated state, and is generally proportioned to the size and extent of the ulcer. If the cancer were of itself and *ab origine* a putrid disease, it is most probable that it would be cured as soon as the *foetor* were corrected; as is the case with other putrid distempers, which are cured whenever the tendency to putrefaction can be overcome. But it has already been observed, that fixed air in all the trials I have made of it, though it generally corrected the offensive smell, has not cured the complaint, which agrees nearly with what Doctor Percival has said of its effect in these cases. There are, indeed, other means of correcting the smell of cancerous ulcers, and much more simple than the application of an apparatus for the generation of fixed air, and which, from all the observations

vations experience has furnished me with on this point, seem to answer the purpose as effectually. The several topics I have used for this purpose are the flowers of zinc, the calamus aromaticus in powder, either alone or mixed with such a proportion of powdered salt ammoniac as my patients could bear; sulphur either alone or combined with a small portion of arsenic, which last preparation shall be spoken of more fully in the sequel of this work. These are the dressings I have chiefly used in the intervals of such as were more active, and by means of which, I have generally preserved my cancers from any very offensive smell; and even in the last stage of the distemper, have succeeded in diminishing greatly this nauseous symptom. Doctor Wathen saw a remarkable instance of this in an extremely offensive cancer, which he saw with me in the most deplorable state of the disease. He expressed his surprise on finding this stench much corrected in

in a few days by means of some of the fore-mentioned alkaline and absorbent powders, assisted with an outward covering of rags dipt in spirituous applications. The spirituous covering I generally used in these cases, was, the martial and ammoniac tincture above-mentioned, either alone or diluted with water, without the addition of the oil of vitriol, which answers nearly to the common tincture of steel with salt ammoniac, to be found in some dispensatories. I shall here observe that in all offensive cancers we ought religiously to abstain from every kind of greasy application, however mild and innocent it may be, and even were it only used with a view to keep on the dressings. No ointment must come near the sore, or even touch the neighbouring sound parts. When the cancerous wound is small and free from any offensive smell, it is better still not to use any grease if it can be avoided; and if we be forced to it, from the dry lint sticking to the edges,

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it will be best to powder the sore first with flowers of zinc, and lay nothing over but the Goulard cerate, or some such mild ointment. Basilicon or the green digestive always add to the offensive smell. Let me be permitted to observe by the way, that it might possibly be better if these digestive ointments were banished from the practice of surgery, and more particularly from the treatment of simple wounds. The smell of them is of itself very disagreeable to the patient as well as the surgeon, and I am fully persuaded they are of no use. The purpose of keeping a simple wound moist and protected from the air, is as well effected by a little white wax and oil melted together, which to render it pleasing to the eye may be coloured with alkanet root. This kind of ointment, the Goulard cerate, and the epulotic cerate are the only topics I have used to simple wounds for these last fourteen years, either in public or private practice. The advantages arising from this,

are,

are, that the wounds thus dressed do not yield so great a share of matter, that the granulations are not therefore so likely to rise above the edges of the sore, that these edges themselves are more easily kept clean, and that the dressings are not in the least offensive to the patient.

But to return to the subject of fixed air. If I did not apply it to cancers merely with a design of correcting their foetid smell, as others have done, it may be asked what was my view in trying it. I acknowledge that my expectations of success from it in cancerous affections were founded on its mephitic quality, rather than on its salutary properties. I have long suspected that the cancer was produced from insects or the germina of them taken up from the air by the lymphatic vessels; and that in the instances of schirrhous tumours, which sometimes continue for a long time in a state of ease and tranquillity, these germina thus absorbed remain in an in-

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animate state 'till some accidental circumstance brings them to life. This has appeared to me to constitute the ulcerated state of the disease. I am not singular in this idea, for in one of the volumes of tracts upon cancers collected by the late Mr. Bell, which was lent me by Doctor William Fordyce, I found it introduced as a received opinion*. And in another tract in the same volume, written in the Italian language, the author speaks of having seen the insect†. But what-

* Tota intentio arsenicum adhibendi videtur superstructa esse opinioni illi, quod cancer vivat. Aut juxta forte pathologiam animatam, quod ex innumeris vermibus vivis confietur. Dissertatio de cancro a Martino Schumacher.

† Ma non andò guari, che crudelmente risorsero (gli spasimi vuol dire) e nuovamente del pari si scemarono, allora quando per gli stessi canali d'onde era piovuto il marciume, un picciolo vermicello si aperse il passo, grosso come un filo ordinario da cucire, lungo alla misura del primo nodo del dito mignolo, di colore rossiccio, siccome sarebbe una fibra di carne salata.

whatever may have been the ideas of others upon this matter, for my own part I have been led into this conjecture, from the nature and situation of the parts in which the disease is usually seated; from the kind of pain peculiar to it, and the progress of the ulceration; from analogy, and the effects of poisonous medicines upon it.

The parts chiefly affected with the cancer are the breasts of women, the womb, the tongue, the lips, the nose, and the face. All these parts are abundantly supplied with absorbent vessels, and are most of them exposed to the external air, so that if there be any germina of insects floating in this fluid, they will be ready to absorb it. The breasts of women in particular, which are by far the most ordinary seat of the complaint, are remarkably full of pores, and from the various

Nuovo metodo per curare sicuramente ogni canchero coperto, e specialmente le ghiande scirrosc delle mammelle, e di altre parti del corpo: opera di Giuseppe Maria Quadria.

state of distention they undergo, these pores must certainly become at different times very large, and consequently more fitted to receive and transmit any thing from without. The mammary glands also to which the lymphatic or absorbent vessels immediately tend, are usually the parts first affected *.

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* I am aware that there are frequently indurations or schirrhous tumours of the internal glands, such as the liver, the mesenteric glands, the kidneys, &c.— But it may be considered, that if these germina be absorbed from without they may either be stopped in the first gland through which the vessels that absorb them pass, or may be accidentally hurried on with the circulation, and deposited in the course of it upon some of the internal glands. Exclusive of this circumstance it is pretty apparent that these indurations are different from the true cancer; so that whether we suppose them produced from the same cause or not, we find at least that the effect is different. Indurations of the mesenteric glands are marks of the scrophula; and the symptoms and appearances attending scrophulous hardnesses are extremely distinct from those which accompany the cancerous induration; and might be accounted for upon a very opposite principle, were it not foreign to my present purpose.

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The second circumstance which suggested the idea to me of the cancer being generated
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With respect to schirrhous tumours of the liver, though they also appear to be indurations of a different kind from the cancer, yet as I suspect this disorder to be more frequent than it is generally imagined, it will not, I hope, be thought intrusive, if I take the opportunity of this note to communicate what has occurred to me in the treatment of these cases.

A negro servant belonging to Doctor Mac Namara was admitted into the Westminster hospital under my care. He had a large prominent tumour on the right side of the linea albæ, and immediately under the margin of the chest. From the seat of the complaint, the symptoms attending, and from an obscure fluctuation discerned in the tumor, I suspected this to be an encysted abscess of the liver, a disease often met with among negroes, and therefore resolved upon opening it. I made an incision through the whole extent of the tumour, and after having divided the muscles of the belly and the peritonæum, gave vent to a quantity of matter, which evidently appeared to be contained in a large cyst, totally distinct from the cavity of the belly as usual in these cases. The sac ran so far back towards the spine that it was not possible to empty it at once, and, indeed, the contents were so viscid and tenacious, that it was only by repeated injections with

by insects, is, the kind of pain peculiar to the disease, and the progress of the ulceration.

Nothing

barley water, continued for about three weeks, that the cyst could be entirely evacuated. When this was done, and that the sides of it were consequently brought nearer together, one might plainly feel an enlargement and induration of the liver, extending through the whole of its region. In little more than two months the wound was healed, except that there remained a fistulous opening which it was impossible for me to close. Considering that this orifice might be kept open by the disease of the organ, I directed my patient to rub half a drachm of strong mercurial ointment every day on the region of the liver, suspending the use of it occasionally, that the mouth might not be affected. By persevering in this course about six weeks, the whole of this immense induration subsided, and the fistulous opening, closed of itself. The success of this case induced me to try the effect of mercurial frictions in two other instances, of an enlargement and induration of the liver evident to the sight and touch. Both these cases were cured by this method, even the induration, which was farthest advanced, and in which a prominence on the same spot where the negro's large swelling had appeared, seemed to indicate a tendency to suppuration, was dissolved without the formation of matter.

Those

Nothing seems more properly to favour the notion of insects corroding the parts than that

Those who are conversant in dissections have frequent opportunities of seeing that large and indurated livers are commonly found in the abdomen of persons who die of a dropsy in that cavity. These indurations have, indeed, been reckoned by some as the chief and perhaps the only cause of these collections of water; which, if it be the case, must be owing to the pressure of a hard mass upon so large a vein as the vena cava; thus obstructing the course of the blood returning to the heart; in the same manner as the pressure of the gravid uterus occasions an anasarca in the legs of pregnant women. Is it not probable then, that this terrible disease might be cured if this apparent cause were removed? Accordingly, I remember to have found (though I cannot recollect where, having unfortunately lost many of my papers) that it was a practice used with success in India, to rub the belly with mercurial ointment in the dropsy of that cavity.

Some years ago I translated a manuscript paper for Doctor Fothergill, which had been sent to him in the German language from a gentleman at Moscow. The author mentioned that he had observed many internal complaints to proceed from indurations of the liver, which could not otherwise be accounted for. He accordingly recommended a more frequent examination of the state of that organ than is generally attended to.

shooting darting pain complained of in this disease, which the patients describe as the pricking of so many needles. The same may be observed of that gradual, creeping, and almost imperceptible corrosion of the parts, by which not only the whole substance of the breast is frequently destroyed, but the ulceration is also extended to the neighbouring skin, and a wound is produced of a most horrid appearance full of cavities and inequalities, not unlike a piece of mouldering ruins. To which we may add, that the disease extends itself in the direction of those lymphatic vessels which first conveyed it to the mammary glands, forming hard cords which terminate and are lost in the indurated glands of the arm-pit.

The third circumstance that has given rise to my conjecture is analogy, and the effects of certain poisonous medicines upon the cancerous affection.

Every

Every insect seems to have its particular bane. Thus in that cutaneous disorder the itch, which from Lewenhoeck's microscopical observations has been shewn to consist in numerous insects swarming on the surface of the skin, sulphur has been found to be the most effectual poison. There are, indeed, other poisons that will destroy these insects, such as hellebore and mercury, but none of these are near so powerful against them as brimstone *. Thus there seems also to be a

* Perhaps it may hereafter be found that most cutaneous disorders arise from the same cause. At least they seem for the most part to have a particular poison appropriated to them. Thus we find, besides the instance of the itch, that in venereal blotches on the skin, sublimate is acknowledged to be the most powerful preparation of mercury. Hellebore has been recommended by the antients, and is still prescribed in many cutaneous eruptions, which we know not how to cure otherwise; and in the tinea or scald head, I have found no poison so effectual as a strong decoction of tobacco, by which I have cured some obstinate cases of this kind in a very short time, after all the usual methods, not omitting even the pitch plaister, had been tried for a long continuance without effect.

particu-

particular poison against the cancer, which is arsenic; which, in many instances of Mr. Guy's practice, and others upon record, has destroyed several cancerous affections, and which, from the experience I have had of it, though so often unsuccessfully used, appears still to be the proper antidote to this distemper.

The fact seems to be, that it is a poison of so dangerous a nature, that it can seldom be used in sufficient quantity to bring about the desired effect, without exposing the patient to too great risque. But if the arsenic be not used in sufficient quantity to eradicate the disease it does hurt rather than good, because after having lost its quality of an antidote, the ill effects of its having acted as a caustic still subsist, and the irritation it has occasioned exasperates the disease. For we well know that cancers, when irritated by caustic applications of any kind, are considerably hastened in their progress, which seems to form another presumptive argument in favour of

of

of the conjecture I have ventured to mention : for when the insects find themselves disturbed by an external application they will make what haste they can to get out of the reach of it. Besides, no other caustic ever acts upon the cancerous affection in the manner that arsenic does ; for, were we to attempt to extract schirrhous glands by any other caustic, we should constantly fail in our attempts ; which I am convinced of as well from the testimony of others as from my own experience. On the contrary, though Mr. Guy's caustic hath not succeeded in every case, yet it is no less certain that many have been cured by it, and that he has frequently extracted schirrhous glands entire with it. A most singular effect which I have also accomplished in one instance, which shall be related hereafter.

These

These are the several reasons that have encouraged me in the conjecture of the cancerous affection being produced by insects; and which induced me to try the application of fixed air to these complaints, in hopes that its noxious quality would destroy these insects and cure the disease. But it is an extremely difficult thing to apply mephitic air to cancerous ulcers in such a manner as to exclude all communication with the external air, upon which circumstance alone, according to my ideas, its efficacy must depend.

The inequality of the parts on which the apparatus is to be fixed, and sometimes the extent of the disease, are obstacles to the close adapting of it, which in some cases are unfurmountable. Add to this, that a bladder is the only thing that can be made use of to contain this mephitic air; for if a hollow glass were applied, it is evident that it would act like a
cupping

cupping glass, and become insupportable upon parts already extremely sensible. Doctor Priestley observes too, that *a bladder, he has found by experience, will not long make a sufficient separation between several kinds of air and common air* *. These may perhaps be the reasons why the application of fixed air has not succeeded with me. Whether the nitrous air discovered by Doctor Priestley, and which he observes to be more noxious than the former, will succeed better, must be determined by future experiments.

Such were in general the methods I used in the treatment of ulcerated cancers; beside which, upon superficial cancerous wounds, where it was my design to make a slight eschar with little pain, or where I was endeavouring to heal the obstinate remains of a cancer previously brought into a small compass, I used to mix some of the magnes arsenicalis, or even some crude arsenic, with a

* Experiments on air, vol. I. p. 37.

proportion of opium, and make it into an ointment by the addition of some Goulard cerate, or any other mild unguent of the same kind. This was made stronger or weaker according to the effect it was meant to produce. The general rule was to take ten grains of the magnes with the same quantity of opium, and mix them with one drachm of soft ointment. This mild application gives little or no pain, and produces evidently good effects. It might perhaps prove useful in removing any fresh appearances of the disease, that are apt to arise after extirpation, however carefully or well performed. Indeed, unless the arsenical caustic can be applied so as to eradicate the whole disease in a short time, I should always prefer this mode of using it, not only on account of its being rendered mild by the addition of an unctuous substance, but also because in this mode of applying it, we can always ascertain the quantity of arsenic used upon any patient in
a given

a given time. This is a material circumstance to attend to ; for if we are too free even in the external application of arsenic for any continuance, it will be apt to bring on pains in the extremities and other disagreeable symptoms. But in this mode it may be continued for any length of time without danger, for as I always spread the ointment as thin as possible upon the lint, a drachm weight of it will last for several dressings, and that drachm contains no more than ten grains of the magnes, in which there are but five of arsenic. It appears to me that the disease may always be palliated and the progress of it checked by this kind of mixture ; and, perhaps, if it were continued for many months uninterruptedly to small cancerous sores about the face, it might often effect a cure : but the great length of time sometimes required to pursue the same method with advantage, frequently discourages the patient and surgeon too from persevering as they ought. I have
had

had two instances of this, one of a cancer on the nose, the other the *noli me tangere* above-mentioned ; both which cases I verily believe would have been completely cured by a steady perseverance in the use of this mild ointment, had it not been for the restlessness of the patients and their anxiety to return into the country. Nor do I think it necessary to add the opium to the mixture, unless the crude arsenic be used, and that in a larger quantity, for the application is sufficiently mild without it. I shall take this opportunity to mention that this arsenical ointment is also very useful in some inveterate ulcers, and likewise in scrophulous sores. I was first induced to try it in scrophulous ulcers, from having found among some of Sir Hans Sloane's manuscripts that the *magnes arsenicalis* was mentioned as a specific against the scrophula. Though I cannot boast of having found it entirely so, yet I have frequently used the *magnes* alone or mixed with opium

to

to these sores, and particularly to the carious parts of bones in them with very good effect.

I am aware that some persons will censure me on this occasion for endeavouring to introduce into practice the old complicated and frequently severe method of dressing sores, instead of those simple and mild dressings so strongly and so justly recommended by all modern writers of estimation. To this charge I answer, that no man can be a greater friend to plain dressings in all simple wounds than I am ; which may be collected from what has been already observed in this pamphlet of my having entirely banished from my practice even the common turpentine dressings of basilicon, or the green ointment, which are still almost in universal use. Neither do I ever employ the lunar caustic, the blue vitriol, or any other escharotic remedy, to keep under those luxuriant granulations which in all simple wounds, particularly in young and sound habits, are so apt to rise

above the edge of the skin, and prevent cicatrization ; though such applications are still in common use for this purpose. To these I have substituted the constant and moderate pressure of a linen roller, wherever the wounds were in a situation to admit of its being applied. This I find more effectual than the former practice, and it is certainly much more mild ; for I know, from my own experience, that even the slightest touch of the blue vitriol upon these tender granulations, occasions no inconsiderable smart, which sometimes continues for some hours after the dressing. But there is a discrimination to be made ; for however I may be an advocate for plain dressings in all simple wounds, yet there are ulcers, tumours, and complicated sores, the treatment of which may require the exertion of every effort that a competent knowledge of the materia medica can suggest to us. We are, indeed, often obliged to feel our way in the dark in some of these cases,

cases, and to vary our applications till experience directs us to one that can even procure tolerable ease to our patient. Nor are we to suppose that the immense store-house of nature and the processes of the chymical art, have in vain supplied us with so great a variety of substances, the properties of which are so distinct. The study of topical applications and their effects is perhaps too much neglected in this age. It is a study not to be pursued without much labour; and when the knowledge is attained, only partially (for it never can be completely) is not calculated to give the surgeon that degree of eminence which he will acquire from dexterity in operation. I would, therefore, earnestly recommend to the young surgeon the study of natural history, not merely as a science of nomenclature, but with a view, as Boerhave advises in his *Methodus Studendi Medicinam*, to acquire an early insight into the properties of bodies: that by combining this knowledge

with the nature of the complaint he is to treat, and with experience, he may be led to a rational application of it. This will effectually secure him from having recourse to those unmeaning combinations with which dispensatories abound; and the absurdity of which has been the cause of the disgrace and neglect of topical applications, though much benefit might accrue from a prudent and scientific management of them.

In page 62 of this work it has been observed, that I had found a preparation of arsenic and sulphur useful in removing the offensive smell of cancers. The method of making this preparation and the proportions are as follow: take of sulphur in impalpable powder, four pounds; of white arsenic in impalpable powder, one pound; mix them, and put them into a small glass retort, place them in a sand heat, and lute on a long neck and a receiver. Raise the fire gradually until the mixture be fused. The
fixed

fixed mass is the part to be levigated for use, the sublimed part is to be rejected.

This was the preparation which I had given internally in the proportion of five grains of arsenic in the day without producing any pernicious effects. From this circumstance, and consequently from the little risque there appeared to be in using it externally, I was inclined to entertain hopes that it might not only correct the offensive smell, but also be attended with more complete success in these cases. I had very good reason indeed to be satisfied with its effects in the few cases I have hitherto had an opportunity of trying it in, and which were of the worst kind. It gave scarce any pain, it corrected the smell and the discharge, it alleviated the painful state of the disease, and checked its rapid progress, if it did nothing more. But even this mild application I found could not be used in all cancers without danger, of which I shall candidly relate the instance.

A lady who had been attacked with a severe paralytic complaint, of which she still had the remains in the difficulty of her speech, put herself under my care, with an exceeding bad ulcerated cancer from which she suffered much pain. Apprehending the consequences of even the smallest quantity of arsenic used in a habit addicted to palsy, I thought it necessary to apprise the family, that my applications being of an arsenical nature I could not answer for the effect they might produce in such a habit. But so eager was the patient to try for relief, and so desperate was her present situation, that it was agreed we should run the risque of the application, and if it should cause any alarming symptom it might then be left off. I proceeded with all possible caution, and as the sore was very large and deep, and would consequently require some quantity of the powder to cover its whole surface, I made it weaker than usual, by mixing it with equal parts of the flowers of zinc.

The

The sore was so much mended by this in a short time, and the patient so evidently relieved, that the satisfaction experienced from this change, made us overlook or not pay sufficient attention to some apparent trifling weakness in the leg attended with slight spasms. But these symptoms continuing and increasing, I could no longer doubt that they were owing to the absorption of the arsenic from so large a surface as the sore exhibited. I therefore desisted from the use of this application, and dressed with nothing more than flowers of zinc and sulphur combined. But notwithstanding this precaution my patient did not long survive this fresh attack.

From this fact we must conclude, that is necessary to abstain entirely from any arsenical application in paralytic habits; and that where the surface of the sore is very large, as it was in this case, and consequently the absorbent power considerable, we should use it with extreme caution.

I am now to give the account which I promised before of my successful treatment of a cancer of another kind, by a method somewhat different from any of the preceding. This disorder was produced from a venereal infection. The patient who applied to me in this case, had had four months before some chancres on the prepuce. He had rubbed in a quantity of mercurial ointment, and taken mercury freely internally. He had also taken the decoctions usually prescribed in these cases, but all to no purpose. When he applied to me, in the month of May, 1776, the chancres were converted into an eroding cancerous ulcer, which had then eaten away most of the glans penis, had seized upon the corpora cavernosa, and had destroyed the greatest part of the prepuce *. The wound was full of ill-conditioned

* I am aware here of the distinction so properly established by an ingenious French writer, Mr Perilhe, in his essay on cancers, between what is called the true cancer

ditioned sloughs, was extremely offensive and very painful. The skin at a considerable distance from the edge of the ulcer was quite black and seemed in a state of mortification. This livid appearance of the skin extended

cancer and the cancerous ulcer, the latter of which he says sometimes admits of a cure. The case here described may perhaps be thought more properly to come under the last appellation: yet as this distinction seems not to have been so precisely drawn, but that in many cases it may be difficult to ascertain to which class the distemper belongs; it has been thought proper to insert this case here, more especially as notwithstanding the acknowledgment that cancerous ulcers sometimes admit of cure, there have been no certain rules laid down for the general management of them. There is the greater reason for this, as the usual treatment of this terrible and rapid cancerous ulcer succeeding the venereal taint, is to the best of my knowledge mostly unsuccessful. In one of the instances that fell under my notice the testicles were laid quite bare, and hung loose as if the integuments had been dissected from them; in another, the ulcer had eaten away the integuments and muscles of the abdomen, and the intestines came out at the aperture. It will not be improper to add, that in these instances the mercury had been continued to the last; a circumstance which determined me to lay aside the use of it in the present case.

itself

itself even to the root of the upper part of the penis, and was creeping on by a red dusky line to the integuments of the belly. I did not judge that there was any success to be expected from the amputation of the part while the mortification seemed to be in its full career. Neither was I inclined to use the arsenical caustic here, lest the eschar produced by it should destroy too much of the penis, the remains of which I was anxious to preserve. On the other hand there appeared to be an absolute necessity of taking some effectual method to stop the progress of the disorder, which must otherwise soon prove fatal to the patient. It then occurred to me that I had met with an account of a medicine consisting of equal parts of crude salt ammoniac, arum root, and crab's claws in fine powder, having been used with good success in cancers*. From the pungency of the
arum

* At the time of my reading this, which, to the best of my recollection was in a book of voyages, I had
taken

arum root, the quickning power of the salt ammoniac, and the utility of absorbent powders in all cancerous, foetid, and malignant ulcers ; I judged this combination to be peculiarly adapted to the present case, and therefore determined to try it in lieu of the arsenical caustic, for the reasons above-mentioned; with a full resolution to alter my plan if some remarkable change were not soon produced by this joined to other efforts. Accordingly, I dipped pieces of lint into my liquid, and placed them upon all the black and livid parts of the skin, even to the edges of the sore, directing my patient to wet these pledgits twice or thrice in the day with the liquid. I strewed the whole surface of the ulcer with the powder above-mentioned, which, notwithstanding the apparently dead

taken a memorandum of the matter with an account of the book I had extracted it from, and the place where the remedy was said to have been tried. But the loss of my papers prevents me from gratifying the curiosity of my readers in these particulars.

floughs

floughs upon it, was still so active as to be sensibly, though not severely felt. The pills with martial flowers were at the same time taken freely, and that nothing might be omitted from which the least advantage was to be expected, I advised my patient to go into the hemlock bath every other day, and to stay in it from half an hour to an hour. All my directions were punctually followed; and there was so favourable an alteration in a short time, that I was encouraged to persevere in the same methods. In less than a month the skin near the root of the penis had entirely recovered its life, and most of the livid appearances were vanished. The floughs were in a great measure separated, and the wound itself had a quick and lively aspect. But it was impossible to prevent some of the blackest part of the skin, at the edges of the sore on the upper part of the penis, from coming away in floughs, and thus enlarging the sore. The powder now

occasioned

occasioned a very considerable smart, from the wound being in a more sensible state. This smart was very sharp on the first application, but the violence of it soon abated, though it sometimes continued troublesome for an hour or two after the dressing. I observed also with chagrin, that as some parts of the fore healed others grew worse; the ulcers still continuing to corrode the under part of the glans and the corpora cavernosa, so that my patient was obliged to compound with the loss of a greater part of the penis than I at first hoped. However, by persevering steadily in this course, the progress of the disorder was gradually stopped, and the wounds were all healed in about two months from his first application to me. No sooner was this effected, than my patient, to my great surprize, was seized with swellings and pains in the extremities, and venereal ulcers on the tonsils, which plainly indicated the communication of the original virus over the whole

whole habit. He had, indeed, complained of a soreness in his throat for about a fortnight before the cancerous ulcers were closed, but as there appeared nothing more upon inspection at that time, than an enlargement of the tonsils without any ulceration, I concluded that this appearance was owing to his having caught cold. But now the disease was manifest, and though the former copious administration of mercury had failed in this case, yet I now judged it necessary again to have recourse to mercurial frictions, aided by the internal use of the sublimate. I imagined also that the failure of this remedy in the first instance had been owing to its not being brought sufficiently into action, (a circumstance which I am apt to think occurs more frequently than is commonly supposed) I ordered my patient to live very freely during his course of mercury, and gave him at the same time warm volatile medicines, to stimulate the vascular and muscular system of the body,

and

and thus increase the power of the mercury. I also took particular care by the use of the hot bath *, and diuretic decoctions, and by suspending occasionally the use of the mercury for a day or two, to divert it from what seems its favourite channel, the salival glands. By these methods he was entirely cured of all his complaints in about two months more, and is at this present time in the most perfect health.

This case seems to point out the following singular circumstance; that the cancerous ulcer succeeding to a venereal infection, is both independent of the original disease and connected with it. Independent with respect to the mode of treatment, and yet connected with it so far as to imply that the

* Not the tepid bath, which is usually prescribed in these cases in what is called the Montpellier method, with intentions very different from mine. But my sentiments on this head will be fully explained in some observations on the venereal disease, which I propose to offer to the public when they are collected and thrown into some kind of order.

original

original virus is not yet destroyed but still exists in the habit. It appears to me, indeed, that this venereal cancer differs very little from a complete sphacelus of the part: and this idea may furnish us with the reason why a continued use of mercury by breaking down the texture of the blood, and relaxing all the solids, seems rather to aggravate than relieve this symptom of the venereal disease, if it may be so called. It is evident, indeed, that wherever there is a tendency to sphacelation, it must unavoidably be encouraged by any medicine that produces such effects as these in the animal œconomy.

I now proceed to speak of cancers of the womb, which I shall consider in the class of ulcerated cancers, as I believe they generally are when they come under our notice.

I have been consulted only in four cases of the cancer of the uterus, and all of them in the most advanced state. In two of them I did no good or very little; in the other two
I gave

I gave much relief, and in one of them prolonged life with tolerable comfort for a considerable time. This was the first case of the kind I was consulted for, and as I have got Doctor Hunter's description of the case by me, written by himself after his examination of the patient at my request, before she put herself under my care, I cannot do better than to give it in his own words.

Nov. 14, 1773.

“ This day, upon examining Mrs. ———,
 “ I find little or no discharge, or offensive
 “ smell : so far she is better than when I ex-
 “ amined her last, about three or four months
 “ ago, during which time she has done no-
 “ thing but drink the decoct. *sarsaparillæ*.
 “ Her principal complaint at present is an
 “ almost perpetual call to make water, with
 “ an uneasy urging pressure downwards.
 “ She has passed some small gravel ; and her
 “ urine deposits large quantities of very
 “ tough slime. No hardness or tumour is to

“ be felt outwardly in the hypogastric re-
 “ gion ; but on introducing the finger into
 “ the vagina, I still find what I should sup-
 “ pose to be an incurable induration of all
 “ the parts at the upper end of the vagina,
 “ and which I should suppose to be in a
 “ schirrhous state that is introductory to ulce-
 “ ration and cancer. The hardness with in-
 “ equality of surface begins about half an
 “ inch within the extremity of the urethra,
 “ and about half an inch more inwards
 “ still, the vagina is contracted into a hard
 “ round ring, little larger than just to allow
 “ the last joint of my finger (which is small)
 “ to pass. The point of the finger meets
 “ there with a softer round piece of flesh,
 “ probably a fungus ; and the ring with all
 “ the parts surrounding it are so firmly fixed
 “ that a pretty firm pressure gives them no
 “ motion, nor does it give her pain. This
 “ hard ring would naturally pass for the
 “ os

“ os uteri, but I think it is too near the external parts to be any thing but vagina.”

Such was the state of the case as given me by Doctor Hunter, to which I shall only add that this perpetual call to make water was the misery of her life ; so that she scarce ever dared to go abroad, could not suffer the jolting of a coach, and was frequently scarce able to remain for one quarter of an hour together in the same posture. When she addressed herself to me to know whether I thought my medicines would be of any service to her, I freely declared that it was a question I could give no satisfactory answer to, not having experienced them in any case of the kind. Beside, that they were cases, which not admitting of any surgical operation, nor indeed of any immediate topical application, except from injections, did not so commonly fall under the cognizance of the surgeon. That I could not, therefore, take upon me to promise her any relief, but that if the knowledge she had of

what I had done in other cancerous complaints made her inclined to try the effect of my remedies, I could take upon me to assure her that they would at least do her no hurt, if they did her no good. She resolved then to put herself under my care, and the method I pursued was to prescribe my pills, made with flores martiales, to order the hemlock bath, and to have an injection thrown up, composed of a strong decoction of hemlock and my liquid in equal parts ; adding to or diminishing the quantity of the liquid as I found she could bear it. She soon took twelve, fourteen, and sometimes twenty pills in the course of the day, each containing ten grains. She went into the hemlock bath twice a week, and staid in it from half an hour to an hour, and she used the injection three or four times in the day. She soon grew better in health and freer from anxiety and uneasiness, and when she had persevered in this method for three months she found herself so much recovered,

covered, that she could sit quietly in company and play at cards as other people, undisturbed by those frequent calls to make water which had before been so troublesome to her: She could also bear to go out in her coach, and in a word, was so materially relieved, that she considered herself as almost cured. Though I was far from entertaining such sanguine hopes, yet it is certain that the progress of the disease was so far checked, and the uneasiness of her situation so thoroughly removed, that she lived upwards of a year and a half after her first applying to me, several months of which period she passed in great comfort and ease. She continued the bathing and pills during all the summer of the year 1774, and remained tolerably well till the beginning of the year 1775. Her complaints began then to return, and continued in a greater or less degree till the time of her death; but they never rose to such a pitch as they were arrived at when she first applied to me; for in the few

weeks before her death she suffered more from a continual hectic fever than from her local complaints, though it must be owned these were likewise much exasperated, particularly the pain she used to complain of in her back.

It is necessary also to mention that upon the first return of her complaints I desired that Doctor Hunter might examine her again to ascertain the state of the parts. This he was so kind as to do, and to give me again the account in writing. But this last paper is among the many I have lost, so that I cannot even ascertain the time when this examination was made. To the best of my remembrance it was in the spring of the year 1775; and it is but just and candid to declare that the tenor of this last paper, as I have it from my memory, signified that the Doctor found little or no alteration either for the better or the worse in the state of the parts since his last examination: so that, however the symp-

toms

toms might have been relieved, the disease seems to have existed invariably the same.

Another case of a cancer in the womb to which I was called was that of a mantua-maker in Piccadilly. She appeared to me so near death when first I saw her, which was in the month of February, 1774, that I attempted to dissuade her from doing any thing. But she had been so strongly persuaded of the relief I had afforded in the case above-mentioned, and withal so totally overcome with pain, that she conjured me to try what could be done. Her pain was constant, so that she scarce got any rest, even with large doses of opium; the discharge from the uterus was prodigious, constantly wetting through numbers of thick cloaths that were laid under, and frequently changed, to receive it, and was so intolerably offensive that one could scarce bear the room. Add to this, that the patient's strength was totally exhausted, and her complexion changed into a yellow cadaverous hue.

I directed her to go into the hemlock bath every other day, and to take the pills with flores martiales constantly and freely. Deploable as this case seemed to be, I was astonished at the sudden change produced in it. In three weeks time the patient's pains were so far lessened, that she slept comfortably with much less opium than she had used before in vain; and her strength was so far recovered that she could sit up best part of the day. The discharge was so amazingly reduced in quantity, that it was not in the least troublesome to her, and the smell of it was inoffensive. Notwithstanding these favourable appearances, she died after remaining for about four months in a languishing but quiet and calm state, free from the violence of those symptoms that had excruciated her for so long a time before she had applied to me, and which nothing she had hitherto tried could give the least relief to. Although this case was so desperate, that it could not certainly

tainly have been considered as any impeachment of the method if no effect had been produced by it, yet I cannot but be persuaded that besides the speedy and unexpected alleviation of all the symptoms, it contributed to allay the miseries of this patient during the last months of her existence.

The third patient who put herself under my care with this dreadful complaint was a lady of quality. The lady flattered herself that she felt some degree of relief at first; but for my own part I freely acknowledge that I do not think she received the least benefit. It is necessary, however, to observe that her stomach being very weak she never took the martial flowers so freely as the other two patients.

The wife of a surgeon in the country, was the subject of the fourth case of the cancer of the uterus that fell under my notice. Though the patient was a young woman, yet her case was as far advanced as that in the second instance,

instance, but in a different way. Being less corpulent the discharge was less, and less offensive, but the frequent and considerable losses of blood she sustained had reduced her to extreme emaciation and weakness. The relief procured in this instance was more marked than in the last, but not in the least to be compared to what I had seen in the two first instances. My patient returned into the country, and died a little more than two months after she had applied to me.

It has often been observed, that our frequent failures in the cure of the cancer of the breast, arise principally from the long concealment of this complaint, proceeding from the ill-judged and fatal modesty of some women. The disease in some, thus becomes unfit for the operation, or too much fixed in the habit to be relieved by it. This bashfulness must operate much more strongly with women who are afflicted with a cancer of the womb; and how much more effectually must it prevent

vent the success of any means that may be attempted to cure this too common and too fatal disorder of the fair sex. Neither indeed could women prevail upon themselves to disclose these complaints in their earliest stages, which I am inclined to think they often do under the appearance of other disorders; is there any determined criterion to assure the physician or surgeon of the nature of the disease. The most terrible cancers of the breast sometimes proceed from almost imperceptible beginnings, or from small schirrhous tumours, which shall have existed for many years in the body, without pain or trouble to the patient. And it is reasonable to presume, that these uterine complaints may arise from the same imperceptible beginnings, and may also continue in the part for a long time before they exert their violence. I have heard many women complain of a pain in the back, which though not violent at first, and coming on only at intervals, has been considered by them-

themselves and by the medical people they consulted, as rheumatism or gravel, and has been treated accordingly, or neglected as a thing not very violent and that would of itself wear off. This is sometimes attended with a fluor albus, or what is commonly called the whites, in which case the pain in the back is often attributed to debility arising from the discharge. I shrewdly suspect these symptoms, even when separate, to indicate frequently the beginning of the cancer in utero, and when combined, more particularly so. It is necessary therefore when a female patient complains of pain in the back to examine carefully the nature and seat of the pain. If it be rheumatic, it will generally be seated about the fascia of the loins, it will be exasperated by lying in bed, and more severely felt upon first rising from a recumbent posture, and it will be alleviated by the necessary motion and exercise of the day. If the pain proceed from urinary complaints it will probably be seated

seated higher up in the loins, and will most properly be distinguished by the other concomitant symptoms of these affections, and by their yielding to the usual remedies prescribed in these cases. But if the pain be of that pricking darting kind so peculiar to the cancerous affection, if it be much aggravated by motion, and if it be seated lower down than the fore-mentioned complaints, upon the os sacrum, and particularly if it be attended with a discharge from the uterus, though ever so inoffensive, we may have reason to suspect an incipient, or perhaps a more advanced state of a schirrhous of the womb. If patients were examined in this early state, by a skilful anatomist and an experienced and judicious man-midwife, well versed in the natural feel of the parts, the true nature of the disease might perhaps be ascertained.

I have been more particular in endeavouring to trace the beginnings of these uterine affections from an expectation that if they
could

could be discovered in their early state, they would be much more likely to yield to the use of the hemlock bath, and the free administration of the flores martiales, joined with astringent injections, than other cancerous diseases. These expectations have been raised in me, not only by the experience of their effect in the preceding cases, but also by the accidental discovery of the great effect of the flores martiales in the liberal doses I have used them, in curing the fluor albus; a circumstance which I hinted at in the former part of this work. I am not ignorant that this medicine has been prescribed by many persons in this common but troublesome distemper; but it has been used in such sparing doses, that its great and peculiar efficacy has not been ascertained. A physician of great learning and eminence to whom I had frequently communicated my thoughts on this subject, assured me that he had not met with any disease more rebellious than this. He
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also informed me that he had found the flores martiales the most effectual remedy against it, but having never given it in such liberal doses as are mentioned in this performance, this may have been the reason of his not having succeeded so fully as he might probably have done. My experience of it, indeed, is only accidental, and therefore not extensive, because these cases fall usually under the notice of the physician, and belong properly to his province. Some few of my cancerous patients have informed me of their being completely cured of the whites while they were taking the martial flowers for their other complaints. One of them, I afterwards was informed, had had this discharge to a most violent degree, and had previously taken a number of medicines for it without the least effect. This circumstance hastened me to try it in some cases of obstinate gleets in men, in which I have most frequently found it effectual, though not universally so. This may perhaps be accounted for, from the difficulty of

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of prevailing upon men who are always running about to confine themselves to a steady perseverance in swallowing a great number of pills every day.

Before I close this part of the work respecting ulcerated cancers, it will not be improper to give the prescription for making the liquid so frequently mentioned, as it is to be found in the writer from whom I took it *, with a short account of the performance that contains it. The pamphlet was published in Latin, at Vienna, in 1767, and is written by Francis Xaverius de Mare, who styles himself Doctor of philosophy and physic. The

* When I first used this liquid, I had not the original book in which the prescription is; but copied it from a periodical work in which it was transcribed, and which Doctor Garthshore (the person from whom Doctor Morris had received his information concerning it) was so obliging to lend me for that purpose. A considerable time after this I had the original work imported from Vienna, being very desirous to see the whole of a performance from part of which I had reaped such advantage.

title of the book is, *Tractatus Medico chirurgico-chemicus, de cancro et spina ventosa curabilibus per medicamentum hactenus secretum, nunc communicatum.*

From this title we see that the writer applies his liquid to the cure of the spina ventosa, as well as of the cancer. The account he gives of the nature and progress of these disorders does not, however, contain any thing new or worthy of remark. There are only four cases adduced in support of the utility of its application, and three of these appear to be scrophulous, though he calls one a spina ventosa. His directions for applying the liquid, are to smear the edges of the sores and all the indurated parts with it, by means of a pencil brush three or four times in the day, and to suffer the part to remain exposed to the air till the liquid dries upon it; so that he has not used it near so liberally as I have done since. His mode of preparing it I shall give in his own words: Ri. Ramentor. ferri lotor. et

supra ignem in vase aperto ficcatorum & minutissimè contusorum; salis armoniaci in pulverem redacti aa unc. iv. Mixta dentur in retortam terream optime in fundo et circumferentia lege artis munitam, imponatur hæc capellæ, admoveatur vas vitreum recipiens, quod bene lutetur: detur ignis in gradu digestionis, & dum retorta calefieri incipit; augeatur successivè ad sublimationis, finitaque sublimatione ad calcinationis gradum. Hoc facto successivæ refrigerationi committatur retorta, et ex refrigerata fractaque accipiatur calcinatum in fundo hærens, caput mortuum teratur, et subigatur minutissimè in mortario lapideo, dein subactum imponatur in vas vitreum et affundantur spiritus vini rectificatissimi Empyreumaticum odorem non redolentis lbij. Agitentur sæpius primis octo horis: post viginti quatuor horas agitatis denuo instilletur tribus quatuorve interstitiis observatis, acerrimi, ut vulgo vocatur, olei vitrioli nigri unc. i—ad quamvis instillationem semper mixta

mixta agitando ; deinde in quiete permittantur per viginti quatuor horas, his elapsis decantetur tinctura, residuo vero in fundo affundantur prioris spiritus vini lbij. Agitentur iterum pluries, dein extractio de novo relinquatur per viginti quatuor horas ; his transactis instilletur iterum, ut prius, olei vitrioli supradicti unc: i. Effervescentia finita vero infundantur spiritus tartari simplicis unc. iv. Agitentur et finita agitatione aliquoties repetita relinquuntur in vase per viginti quatuor horas ; his elapsis secunda hæc solutio miscetur priori decantatæ, et optime simul agitentur, tunc parata est ad usum PANACEA NOSTRA ANTI-CANCROSA.

This is a very elaborate process, and it is evident that a tincture of the same properties might be made with much less trouble. But I chose not to depart from the prescription, and used it just as it is here set down. I varied it afterwards by omitting the oil of vitriol and the oil of tartar, where I did not

think them necessary. My first motive, indeed, for employing it was the salt ammoniac used in it, but I am since convinced that the addition of the steel has a very considerable share in its virtues. Perhaps some may think that its effects depend entirely upon this last substance, that there is little of the salt ammoniac in the tincture, and that the only use of this salt in the process is to extract a greater proportion of the iron. However this may be, it is certain that this liquid, or one of a similar kind, is likely to prove a very serviceable topic, the use of which may hereafter be extended. For besides the evident advantages obtained from it in the first case described in this work, I have found it very useful in dissipating recent schirrhous tumours, as will be shewn hereafter; in resolving cancerous indurations or checking their progress; and in alleviating the darting pain of the schirrhus. It is also useful in softening the callous edges of ulcers and in stopping
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the advances of putrefaction, as in the instance before adduced of the cancerous ulcer of the penis; and in another of a very large and most alarming anthrax or carbuncle between the shoulders, where it was used with remarkable success. But there is another disease which is frequently very troublesome, and against which this liquid seems to act with peculiar efficacy, this is, venereal warts. I never knew it fail in this complaint; but as it is a very common one, and often relieved by other means, I shall only adduce one instance of this kind, because it is of such a nature that it seems to put the superiority of this application in this case beyond a doubt.

In the year 1774 a young man applied to me who had been in St. Thomas's hospital with a confirmed lues. When he came to me, all his glans penis was totally surrounded and covered with warts, so that it exhibited the appearance of a cauliflower. These warts were extremely painful, and so large that he

could not bring the prepuce over them. Having been under very skilful hands, every known method had been tried to cure him of this disagreeable complaint. He had been salivated, the warts had been fumigated with cinnabar, caustics both mercurial and others had been applied, but with no success. They had also been cut off close to their base, and notwithstanding every precaution taken to keep them down afterwards, they still sprouted afresh, and grew to their former size, so that they were deemed incurable. I was very careful in inquiring what had been done for him, and he being an intelligent lad, gave me full information, for not having tried the liquid in these cases, I knew nothing of its effect, and intended therefore to try the Savin powder with him, till he assured me that had also been used to no purpose. I then resolved to try the liquid, which was applied by dipping a pencil brush into it, and touching all the warts, leaving them exposed

posed to the air till they became dry. But the warts were at first so exquisitely sensible, that he could not bear the pungency of the liquid. In order, therefore, to remove this tenderness of the parts, I gave him some expressed juice of hemlock, with which I directed him to wash the warts frequently in the course of the day. This succeeded to my wishes, so that in a few days he was able to bear the liquid, which in about six weeks entirely removed all his warts, and that with very little pain. When I have used this liquid since in cases of this kind where the warts were not painful, I have directed it to be applied with the end of a tooth-pick or pen dipped in it, and pressed on the surface of the warts, so as to make some impression upon them.

P A R T. II.

*Of the Treatment of Schirrhous Tumours or
Occult Cancers.*

I NOW proceed to communicate the methods I have used in the treatment of schirrhous tumours, and give an account of the good or bad success that has attended them. In doing this it may not be improper to observe that I shall have occasion to mention three cases of recent indurations immediately consequent upon the milk abscess of the breast, but as I treated them in a different manner from that in which I usually treat these last complaints, and, indeed, was obliged to treat them differently, I think myself authorized to consider them as incipient schirrhous tumours.

The first case of the schirrhous that presented itself was that of M. Perrin, an old woman between fifty and sixty, who, in the
year

year 1772, was made an out patient in the hospital, under my care. The late Doctor Brickenden had for a considerable time tried several things to relieve her with no effect. She had been troubled for some years with two schirrhous tumours in the left breast, which, when she applied to me, were both very large and hard, one of them as big as my fist, and which had latterly become very painful. Both the tumours were loose, but the largest of them formed an angular projection, which was near the surface of the skin, and appeared likely to adhere to it at that spot. This woman never did any thing more than take the flores martiales very freely, and apply to the tumours a large piece of doubled linen dipped in the liquid, which she renewed several times in the day. She certainly used this liquid more freely than any other patient who ever tried it, for her skin not being tender she was able to bear it much better. Add to this, that in a few months she

found

found herself so much relieved from the pain of the disease, that she paid little attention to the smart of an application from which she experienced so much benefit. She persevered with great resolution, and with very little intermission in the use of these remedies for upwards of a twelvemonth; at which time she was entirely free from any kind of pain; and the tumours were so considerably decreased in every respect, that they were reduced to much less than a fourth part of their former size. The least tumour was, indeed, scarce perceptible, and the largest was almost flat, and was divided by several chops or fissures under the skin, which made it feel as if it were cracking to pieces. The angular projection was removed from the skin, to which there was now no danger of an adhesion being formed; and the tumour was so remarkably softened that it felt rather like a piece of wet and rumpled rag in the breast than like an indurated gland. It was pleasant to see how

how evidently this woman recovered her health, which was in a very languid state when she first applied to me; and how lively and full of spirits she became; an effect which I have always observed to follow whenever the martial flowers were taken freely for any length of time. But this was all the advantage I was able to gain in the case; it was never possible for me to dissolve the tumours entirely: they remained in the same indolent and quiet state till the time of her death, which happened about two years after this, from an illness totally independent of the complaint. She had, indeed, done nothing for a considerable time before she died, except that she used the liquid now and then, which seemed to contribute to keep the part in the same state it was in, a little more than a year after she began the process.

Mrs. H. aged 30, applied to me on the 19th of October, 1773. She had been seized with a fever nine days after her lying-in.

in. This brought on an abscess in the left breast, which got well in about a fortnight, and when the discharge was nearly stopped, she found a swelling come on in the right breast. It was then very painful and much swelled even under the arm-pit. Linseed and bread and milk poultices had been assiduously applied for more than two months, which though they alleviated the pain, yet still the swelling remained invariably the same. When I examined her, there was an oblong indurated tumour, very hard to the touch, about four inches in length, and extending across the nipple. Imagining this to be a milk breast, I tried at first the application I commonly used in those cases, and of which an account shall be given in the third part of this work. It was continued more than a fortnight without producing any sensible effect. But as it was not usual with me to see that application persisted in so long in milk breasts, without perceiving some alteration,

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tion, I supplied my patient with some of the liquid before described, directing her to dip a double rag in it and lay it all over the tumour, and to wet the rag as often in the day as the skin would bear it; taking the precaution of guarding the nipple either with a piece of dry lint or a pledget of some soft ointment, lest the liquor should excoriate it. In a few days the tumour began insensibly to melt away, and in less than three weeks had totally disappeared.

Ann Highland, aged 29, came into the hospital in the year 1773 with a large indurated tumour in the breast, eleven months after giving suck to two children. In the beginning of the eleventh month the children were seized with the small pox. Soon after this she perceived a swelling in her breast, which in three weeks burst into five different apertures, and discharged a small quantity of matter. She used a bread and milk poultice for more than two months without effect,

before

before she applied to me. When I saw her, all the original orifices were still open, and there was a large indurated gland in the midst of the breast : there was also a swelled gland under the arm-pit. She suffered extremely with the pain of this complaint, which she described as of the pricking, darting kind. The sores were all sloughy and of a purple hue. Though it be frequent to see the sores have an ill-conditioned aspect in milk-breasts, that are treated with bread and milk poultices, yet I never saw any of them with so very bad a look as these, so that, indeed, I was alarmed at the appearance. Whether this circumstance were owing to the virus of the small-pox I cannot determine. It induced me, however, not to consider this as a mere milk breast, more especially as the complaint had come on so long after lying-in, and I therefore directed the patient to use the liquid as the former had done, not even covering the sores with any thing else. This applica-
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tion was renewed five or six times in the day, as often as she could bear it, for it smarted much on being first applied, and the smart lasted about an hour. In a few days she found much relief from the pain ; and the first and almost immediate effect of the application was, that the milk flowed plentifully with the matter from all the sores, and from the nipple. In a short time the sores were all healed ; and in a month the enlargement of the gland under the arm-pit was dispersed ; and the large swelling itself considerably diminished. This induration however still subsisted, but as she was now entirely free from pain and desirous of returning to her family, she went out of the hospital, and by persevering in the use of the liquid six weeks longer was perfectly cured. The free discharge of milk occasioned by the first application of the liquid in this case, indicated that there was a coagulation of that fluid attending this complaint. But the symptoms above described, the form
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of the tumour; the looseness of the cellular substance of the breast, which in this case was entirely free from induration, and the continuance of the pain, though a free issue was given to the matter by five openings (a circumstance which usually procures ease in milk breasts) and the time, near three months, employed in getting rid of the disorder, induce me to think that it partook more of the nature of a recent schirrhous tumour.

Mrs. B. aged 30, applied to me at the desire of Mr. Jarvis, the surgeon, on the 11th of November, 1773. She had lain in six months before. A fortnight after her lying-in she had her right breast disordered from a coagulation of the milk. This complaint lasted about two months, and as that breast got well a hardness was formed in the other, which suppurated and discharged a great quantity of matter. The wounds healed, but left an indurated tumour, which sometimes partly disappeared and came again.

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It returned about two months before she applied to me, bursting again, but the wound had been closed about a fortnight before. When I saw her, there was a considerable induration extending almost over the whole breast. It was hard to the touch, in some parts unequal, and attended with much pricking darting pain at intervals. This was treated as the former case. The pain soon went off, and the tumour lessened, but it was near four months before it was completely dissolved.

In the month of May, 1774, I was consulted by an eminent and learned physician on account of his lady, who was afflicted with a scirrhus tumour of considerable standing. Upon examining the part, I found the swelling remarkably hard and stony, and so large that it occupied almost the whole breast, and extended towards the arm-pit. The pain was very acute, and, indeed, she complained of wandering pains over the whole body, which made her life very uncomfortable.

comfortable. About the middle of the tumour towards the nipple, the skin adhered to the surface, and was already discoloured, so that this schirrhus would certainly have burst very soon and have become an ulcerated cancer. I acquainted the physician with every thing I had already done in these complaints, and with the methods I intended to pursue with his lady, merely in the view to give ease, check the progress of the disorder, and prevent the tumour from ulcerating, which was all I expected to do in this case. He approved of my plan; and accordingly the patient was put into the hemlock bath, she took the flores martiales as freely as she could, and applied the liquid externally. Every advantage we had promised to ourselves was obtained. The patient was much relieved from pain, the tumour was softened and diminished in size, and it was kept from bursting, which it most probably would have done in the course of a few weeks. This
amend-

amendment continued a longer time than we had any reason to expect from the state of the disease and the age of the patient. In a word, from the time the relief began to be apparent, which was after persevering about three or four months in the methods prescribed, she remained upwards of a year in a very tolerable state. It was not till the autumn or beginning of the winter 1775 that her pains seemed to return with more violence than she had felt them for some time. The tumour, however, was not yet burst, but there now appeared a vesicle of blood immediately under the cuticle which seemed once more ready to make an opening. Upon considering the alteration made in the tumour, which was much diminished from its former size, - I ventured to accelerate the bursting of the cuticle, and therefore emptied the vesicle of blood by passing a lancet into it, in order to try, whether by the use of the arsenical caustic, applied with such a pro-

portion of opium as not to make it act with violence, I might be so happy as gradually to remove the whole of the tumour. But whether the state of the disease would not admit of this method of treatment, or whether my patient's age was unable to bear the labour of such an operation, I cannot take upon me to determine. It is certain, however, that she fell a victim to the disorder in the beginning of the year 1776.

While I was attending this lady one of the servants in the family applied to me with a recent schirrhous tumour in the breast, attended with frequent pain. This was removed in a short time merely by the application of the liquid.

In the number of schirrhous cases I have attended there are several, the progress of which has been checked in as evident a manner as in the preceding case. This has been remarkable in one very deplorable instance of the kind. There is a species of schirrhus, which

which seems not sufficiently distinguished by writers on this subject, and may be well stiled the true occult cancer; is more malignant in its nature, more terrible in its effects, more rapid in its progress, and more certainly fatal than any other. Whether it may differ in its nature from other cancers I cannot tell, but I rather imagine that its peculiar malignancy arises from its seizing upon a large portion of the animal machine at once, and not advancing by slow degrees, and from almost imperceptible beginnings, as the more frequent indolent schirrhous or creeping cancer does. One of the distinguishing marks, indeed, of this disease is the whole substance of the breast being suddenly attacked with a stony and almost unmoveable hardness. The disease is sometimes confined to this part at first, sometimes extends to the arm-pit, the neighbouring ribs, the clavicle itself, and the glands of the neck. The pain of the disease is exquisite, scarce to be moderated by the most

powerful opiates, and the patients describe it as the constant gnawing of dogs. I cannot avoid taking notice that in the few women I have seen tortured with this disease, I have observed that the pores of the skin were uncommonly large, of which I have certified myself more particularly by looking at the part with a good lens, and comparing the appearances with those of the cancerous affection in other skins, the texture of which seemed more firm and compact. This circumstance, if upon examination it should appear to others as it did to me, may possibly be admitted in collateral support of the conjecture ventured in the preceding pages, that the cancer may proceed from the introduction of insects or their germina through the pores of the skin. However this may be, it is a fact, that I never saw any of these dreadful cases relieved by any method hitherto pursued. Even the operation, though practised at the most early period; and before the disease

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case appeared to have extended itself beyond the part, has never succeeded in these cases to my knowledge. The fate of the patient, indeed, is in general soon decided. From six weeks to two or three months, or at most six, are generally the limits of it.

I was called to a lady with one of these occult cancers in the year 1774. Besides the whole breast being indurated in the manner before described, there was a schirrhous gland lying deep in the arm-pit, which occasioned the arm to swell, though the disease was very recent; and there was also an indurated fixed tumour above the clavicle. A surgeon of remarkable sagacity and extensive practice had seen this case a few days before me. He was too well acquainted with the fatal prognostic of this disease, which he thought would terminate in a few weeks, not to give warning of it to the patient's friends. But even in this terrible case the pain was evidently diminished by the hemlock

bath, and the rapid progress of it seemed for a while to be checked. But these deceitful hopes did not last long, for she died about seven months after she had been under my care.

Upon examining the body after death, the breast was found strongly adhering to the ribs, some of which were carious. The cancer had even penetrated the cavity of the thorax, and affected the internal surface of the pleura. Most of the clavicle was totally rotten and fell to pieces upon the touch, besides which there was a large cancerous gland in the groin on the opposite side to that where the breast was affected. The stench too was almost intolerable, though it had been very trifling while the patient lived, and that no kind of smell was perceived till near the period of her existence.

One remarkable effect happened, which I shall here take the opportunity of mentioning, and which I attribute to the hemlock bath.

bath. It was observed only in this and two other cases, where the disease was very extensive. I mean the formation of an abscess, some few months after the bath had been used. In the fore-mentioned case the abscess was formed in the fore-arm of the diseased side; in another, under the arm-pit of the opposite side, and in the third in the groin of the opposite side. From these circumstances and the large suppurations brought on by this bath in two of the cases of ulcerated cancers before-mentioned, we may presume that the quantity of hemlock absorbed by this mode of introducing it in the habit, must necessarily quicken the circulation, and put all the fluids in agitation, by which means these suppurations are probably brought on. It may be observed, by the way, that these effects seem very contrary to paralytic affections, which some learned men think the hemlock has a tendency to produce. For my own part, in all the numerous instances in which I have employ-

employed this plant, and in the free use I have made of it, I never yet observed any paralytic symptom to arise from it, nor, indeed, any other bad symptom, unless these suppurations should be deemed so, which however it must be remarked, healed very kindly after having been opened, notwithstanding the cancerous disease prevailing in the habit.

Finding many of these schirrhous cases obstinately resist every method employed for their cure, though they were most of them relieved, I was induced to try the effect of an arsenical plaister to them, encouraged by the evident advantages I had seen to result from the external use of the arsenic in cancerous ulcers. For this purpose I chose to employ the mildest preparation I had of this mineral, and therefore had some of the yellow powder, described in the former part of this work, mixed with suet and other ingredients to the consistence of a pretty soft plaister. The preparation itself was mild, as we see it contained

no more than one grain of arsenic to four of sulphur, and that so much weakened by this combination, that it has been observed I had given internally a quantity of this powder, containing five grains of the arsenic, with greater security than I could give one grain and a half of the crude mineral. Besides this, the preparation would be still weakened by the addition of the ingredients necessary to form it into a plaister, so that I had not the least reason to suspect this application would be attended with any bad consequence. Neither, indeed, do I think it would, had it not been for an accidental circumstance, which I confess I did not foresee. This plaister was applied to six different patients at the same time, and in a little while the schirrhous tumours afforded such evident marks of diminution, that I had every reason to be satisfied with my having thought of this application: I afterwards tried it in another case, where my patient was at the same time using the
hemlock

hemlock bath. But here some paralytic symptoms began to shew themselves so imperceptibly at first, that I was not aware of the danger till it increased beyond the power of relief. I could scarce persuade myself that such an effect could be produced by this mild arsenical plaister, till another patient who had applied it for some months with great hopes without using the bath, was at length seized with very disagreeable complaints in the bowels, upon going into the bath, while she used the arsenical plaister. She was, however, relieved from this attack, but these instances convinced me that the warm water, by opening the pores, had occasioned too great an absorption of the arsenic, and had perhaps contributed to separate it from the sulphur; without which process I presume these symptoms could not have been brought about. However this may be, though my other patients who used the same application, and did not go into the warm bath, had not suffered
any

any disagreeable symptom, and that I had every reason to wish to continue it with them, yet I determined to lay it aside, fearing lest some accidental circumstance, which it was impossible for me to foresee, might separate the arsenic from the sulphur, or encourage a too liberal absorption of it. I therefore immediately collected from my several patients all that remained of this arsenical plaister, and threw it away, determined never to use it more.

In one of the schirrhous tumours, in which I had tried the fore-mentioned methods without success, I resolved to attempt the extirpation of it by the arsenical caustic. My patient was extremely timorous, and would by no means be persuaded to submit to the operation by the knife. She had a very hard stubborn schirrhous in the right breast just above the nipple, of the size of a small apple, and beyond this a small indurated gland under the axilla. The arsenical preparation I
used

used in this case was composed of one third of antimony and two thirds of white arsenic fused together. This being reduced into impalpable powder, a few grains of it were mixed with as much powdered opium. But as the skin was entire, and as I knew the arsenic would not act through the cuticle; the day before this powder was applied I rubbed the whole surface of the gland gently with the lunar caustic *. By this contrivance the

* I did not know whether Plunket's powder acted through the cuticle, or whether he had some method of separating this part, in order to make way for the action of the arsenic. But I am inclined to think that this effect is produced in his powder by the crow's foot, which is said to enter into its composition, and which is a very acrid and pungent plant. My method will perhaps be thought preferable, as the touching the entire skin with lunar caustic is not painful, whereas the action of so irritating a vegetable I should imagine must add considerably to the pain of the application. On the other hand, I believe Plunket's powder is quicker in its action than this preparation, because in his, the arsenic and sulphur, though used in equal quantities, are incorporated in their crude state

the cuticle was easily separated next day, when mixing a small quantity of the powder with part of the yolk of an egg, so as to bring it to the consistence of an ointment, I spread this upon a pledget cut to the size of the gland, and applied it to the whole surface. The pain was very great for the first four and twenty hours, but after that subsided. I left this first dressing on for several days, when seeing it ready to drop off I removed it, and found that all that part of the skin on which the caustic had been applied was cracking all round and the tumour beginning to separate. In expectation of facilitating this separation I made a few scarifications on the destroyed surface, and filled the crevices with more of the powder, applying over it a pledget of the same kind as the former. But this second application did not as I imagine produce any effect, for it caused no pain. I then waited

state by mixing them in a mortar, without being exposed to the action of fire, as the arsenic and antimony are in my preparation.

a few days to observe what would happen. The separation began to take place more evidently at the edges, which now looked florid, though the tumour did not yet seem ready to come away. To hasten this event, I judged it proper to put some of the powder all round the separating edges, and as low down as it could be insinuated between the diseased gland and the sound skin. I soon found that this contrivance had its effect, for the pain it occasioned was more violent than that produced by the first dressing. I was, however, obliged to repeat the application of the powder to different parts of the edges at intervals, but never in so large a quantity as before. By this method the separation of the tumour was effected in little more than two months, and the gland came out entire as a nut out of its shell, or as if it had been cleanly dissected with a knife. The small gland under the arm-pit I had put nothing to, thinking it would dissolve by the suppuration of the
larger

larger one, but in this I was mistaking. It still remained, but this circumstance did not prevent the wound made by the separation of the larger gland from healing very fast after it had come out. Seeing the small gland still exist after the healing of the wound contrary to my expectations, I was very sorry I had not treated that in the same manner as the large one, and at the same time; which might have been done with great ease, for it was so small that the patient would not probably have received much additional pain from it. I endeavoured to persuade her to let me apply the caustic upon this little swelling after the wound was healed, but I could not prevail. She was so well satisfied with having got rid of the most material part of the disease, and being freed from the pain which that gave her, and so fearful of going through the same violent pain again, that she chose rather to remain with it as it was. I saw her about a year and a half after this, when she was in

perfect health ; the little gland under the arm-pit remained, but it was neither increased nor decreased in size. She suffered no pain from it, and there was then no other appearance of the complaint.

This is the only instance in which I ever attempted to *draw out* the schirrhous gland, as it is vulgarly called. I have heard some eminent physicians say, that it was a desideratum in surgery to know how to do this as Mr. Guy did. Whether Mr. Guy's method be the same as Mr. Plunket's was, as it is imagined, I cannot take upon me to determine. I shall only observe, that here is an instance of the same thing being done by a method very different from Plunket's, though essentially perhaps the same, with regard to the chief remedy that seems to produce the effect. That effect, by which ever of these methods it may be brought about, or however painful may be their operation, is certainly a very surprizing one; and may be of advantage, not
only

only with respect to many timid persons who cannot reconcile their minds to the terror of the knife ; but may also be of utility in some cases where the knife cannot be used with safety. I shall be happy if the advances I have made in this point should induce my brethren to turn their thoughts to this kind of operation, which, if it were once rescued from the hands of empiricism, might not only become more certain under the directions of a man of learning, attention, and experience, but might probably be rendered more mild in its effects. To facilitate the attempts of others in this matter, I shall observe that I was not satisfied with my method of doing it, though it succeeded. I thought the operation too slow, and that I was obliged to renew the application too often, which not only prolonged the pain, but likewise made it necessary for me to use a greater quantity of arsenic, and to continue it for a longer time than I could have wished. It might perhaps

succeed better if the powder were made more active. For this purpose I should prefer the crude arsenic to that which has been fused by heat. Neither is it necessary perhaps to blend it with sulphur, which only serves to weaken its operation ; for a very small portion of arsenic when mixed with the yolk of an egg may be applied to a pretty large surface; and if we wish to divide its particles and spread a small quantity over a larger surface, this may as well be done by adding some testaceous powder to it, which will have this effect without altering its properties. I would also recommend the corrosive sublimate to be joined to it, for although this combination quickens its operation very considerably, yet I am convinced from experience that it adds very little, if at all, to the pain caused by the arsenic. One thing further I must observe, which is, that when a schirrhous gland becomes ulcerated in one part, and that the induration subsists with the skin entire much beyond

beyond the ulceration, the application of arsenic in this case upon the ulcerated part of the gland seems to act no more than any other caustic does, except that its effect may be more extensive, and destroy more of the gland. But it does not, as in the instance just recited, dispose the gland to separate from the sound parts. This action seems to depend on the application of the arsenic to the sound skin when deprived of its cuticle. The mineral seems then to act by bringing on inflammation and suppuration in the cellular membrane all around and underneath the diseased gland, which is thus forced out entire and unaffected by the caustic. This is a material point to attend to, and which I have learned only from disagreeable experience. If any one, therefore, be desirous of applying the arsenic to an indurated gland, which is ulcerated in the middle, in the expectation of separating the whole gland at once, he must extend the application all over the indurated part, after

having deprived the surrounding skin of its cuticle, either by a blister, or by the method made use of by me in the above instance, which I think preferable, as being less irritating. Perhaps it may hereafter be found only necessary to make a circle round the whole tumour for the application of the arsenical caustic. If this should succeed, which is not improbable, from considering the effects of this caustic, the utility of this method may be extended to cases, where from the extent of the complaint it would not be safe to use it in the present mode, and that for obvious reasons. This is, however, merely a conjecture; and I sincerely and ardently wish that these, which are all the observations I have been able to make upon the use and effects of arsenic, may lay the foundation of other more important discoveries, which may hereafter tend to the improvement of surgery, and the benefit of mankind.

Before

Before I quit this part of my subject, it will not be improper to take notice of a disorder in the breast, to which I know not what name to give. It cannot be called a schirrhus, for it is not attended with any sensible external mark of swelling; neither can it be deemed an ulcerated cancer, for there is no sore accompanying it. But from the nature of the pain complained of in this disorder, and other circumstances, it appeared to me to have a cancerous tendency.

On the 24th of April, 1775, Mrs. B——, of the Temple, consulted me for a complaint in both breasts. She had for a few years been afflicted with a violent aching pricking pain in them, which had lately increased to so great a degree, that it was almost intolerable. The breasts were exceedingly sore to the touch, so that she could not even bear the natural weight of them; and for two years before had not been able to lie in bed on one side or the other, but was obliged to sleep

in a supine posture with her arms folded so as to support them. Notwithstanding these symptoms, upon examining the breasts I could not find any evident marks of a schirrhous tumour in either of them. The texture of the glands seemed, indeed, to be rather firmer than it ought to be. This patient had been ten months under the care of another surgeon, but nothing he had done for her had given her the least relief; on the contrary, her pain was become greater and more constant. She persevered for a twelvemonth in the internal use of the flores martiales, and the external application of the liquid, without much benefit, except that she found the complaint rather more tolerable. At length I prevailed upon her to try the hemlock bath, which she began to use in the month of May, 1776. She went into the bath twice in the course of a week, and when she had continued for three months, found more relief from this than she had done from any thing she

she had tried before. She persisted in the use of this bath till Christmas, 1776; began to go into it again in April 1777, and continued till November in the same year. At this present writing, in 1779, the left breast has no remains of the disorder; and the right is so much mended that all she complains of now is a tenderness upon one of the ribs underneath. She can now sleep on either side, and is perfectly free from any kind of pain.

The other case of the same kind is that of a young woman who had been afflicted for more than two years with very excruciating pains in her breasts, which upon examination discovered not the least apparent mark of disease. She had been for a very long time under the care of a surgeon of great knowledge and sagacity, who had in vain endeavoured to relieve her. I was then desired by a pupil of the hospital to permit her to take my pills, as they were usually called, of the flores martiales. She took several in the day,
and

and by continuing them between two and three months was perfectly freed from her complaint. She used no external application to the breasts. Near a twelvemonth after, having suffered some uneasiness of mind, she was seized again with the same disorder. She had recourse to the same remedy, and obtained ease in a short time; since which she has had no return of the complaint.

P A R T III.

Of the Method of treating the Coagulation of Milk in the Breasts of Women after lying-in, commonly called the Milk Breast, and the Abscess in the Breast, which frequently succeed it.

THIS is a complaint made very light of by most practitioners in surgery, from a supposition that it always gets well in time without any thing being done to it, except keeping the part covered with a large bread and milk poultice, and that it never degenerates into a schirrhous tumour or cancer.

I cannot help thinking that this is a misconceived opinion. Besides the testimony of Astruc (which I shall soon take particular notice of) and many other writers in support of a contrary opinion, experience has shewn me some instances of very malignant cancers which were traced by the patients themselves from a milk abscess in the breast, with-

without any interruption of the complaints, till they had arrived at the bad state in which I first saw them *. It is probable too from all that has been said before, that the recent induration mentioned in the second part of this work, and which succeeded the abscess of the

* I have generally observed too that the schirrhous tumours I have seen, which were traced from the milk breast, were always of a more irregular angular form, and flatter than other schirrhous tumours, which could not be apparently traced from the same cause. It should seem, therefore, that the schirrhous succeeding the induration of the milk breast, adopts the same kind of form that it had before its degeneracy. This diversity of form, indeed, has been considered as one of the distinguishing marks of this disease; but I cannot think that the round or regular oblong figure is a characteristic of the true schirrhous, which puts on all sorts of forms. Perhaps, if the observation here laid down should be made by others, we may at last come to distinguish those kinds of schirrhous tumours that succeed the induration of the milk breast from others. Whether such a distinction will be of any use in practice I cannot tell; but from all I have been able to observe upon this matter, I am inclined to think that these irregular schirrhous tumours are more obstinate than those which are round and smooth.

breast,

breast, would have laid the foundation of some cancerous affection had they not been removed.

One argument advanced in support of the indurations of the milk breast not degenerating into a schirrhus, is that they are diseases of different parts; the schirrhus being a hardness of the mammary glands, and the other complaint being merely an induration of the cellular and adipose membrane of the breasts. This I apprehend to be a position, erroneous both in itself, and in the consequence deduced from it. For the disease being acknowledged on all sides to consist originally in a coagulation of the milk, it follows that it must necessarily exist in those parts destined by nature for the secretion, receptacle, and conveyance of that fluid; which are the mammary glands, and the lactiferous tubes proceeding from them. These lactiferous tubes pervade the whole substance of the breast, and I presume it is by their being distended with coagulated

gulated milk, that the cells of the cellular substance become compressed on all sides, so as to exhibit the appearance of the induration being seated in them. It may be urged, indeed, that this compression of the sides of the cellular substance being continued for a long time, the cells will not be able to recover their tone, even though the obstruction of the lactiferous tubes that run through them should be removed; and that the induration will therefore still subsist. Whether this be the case or not, which it is impossible to determine; yet, admitting that the induration existed only in the cellular membrane, this would be no sort of proof that the complaint would not degenerate into a schirrhous or cancer. For all ulcerated cancers are accompanied with indurations of the cellular and adipose membrane, which, indeed, is one of the strongest marks of the true cancer. These schirrhous hardnesses of the cellular membrane are indeed as difficult to cure as any other part of the

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the disease; and from the consideration of that dreadful species of schirrhous or occult cancer described in the second part of this work, which seizes the whole substance of the breast, seem to be of a more malignant nature, than a schirrhous of the mammary glands alone. So that in whatever point of view we may consider the affection of the milk breast, whether as a disease of the mammary glands and of the lactiferous tubes proceeding from them, or merely as a disorder of the cellular and adipose substance of the breast, it is equally possible that it may degenerate into a schirrhous or cancer.

It must be acknowledged, however, that the instances of this degeneracy are rare, when compared with the number of persons who are troubled with the milk breast. Neither is it necessary to suppose that the diseases, though seated in the same parts, are originally the same. The milk induration seems to become a schirrhous merely from inattention,

tion, neglect, or improper treatment. But the possibility of so dreadful an event calls for every exertion in our power to prevent it. The learned Astruc observes, that abscesses of the breast often leave indurations of the glands, when some of the obstructed part remains unsuppurated*. This seems to be the exact state of the case, and like most of that accurate author's observations, very just. The matter is brought about as I apprehend in the following manner, which, if it be really the case, will serve not only to account for the variety of opinions on this head, but also to reconcile them. I have seen these complaints last four, six, eight and ten months when treated by the constant application of a bread and milk poultice, and when at length the abscess has been healed, and there has appeared no further disposition to suppuration, the complaint has been considered as cured; and though there should remain *some of the*

* On the Diseases of Women. Book IV. chap. 4. p. 324.

obstructed part unsuppurated, yet there being no more pain it is concluded that these remains will go away of themselves, merely by keeping the part warm. This, indeed, does frequently happen; but it also happens sometimes that the patient finding such great difference between her present state, and that when she was exposed to the sufferings occasioned by a fresh abscess collecting and bursting every three or four weeks, perhaps for months together, thinks herself well, and neglects this trifling induration; which may, at the same time, be so small as scarce to be distinguished by an unskilful touch. Should she chance to feel a little pain in it now and then, she attributes this to the change of weather, or possibly to the necessary consequence of what she cannot but have considered as a grievous complaint. Thus the disease being neglected may remain for a long time in a tolerably quiet state, 'till some accidental circumstance puts its virulence into action.

Even then it may continue for a long time almost imperceptibly increafing, 'till it fhall arrive to fuch a height as to be no longer miftaken. This event may take place at fo confiderable a diftance of time from the formation of the abfcefs in the breaft, that this complaint fhall no longer be remembered as the caufe.

But even fetting afide thefe confiderations, it muft be owned that the coagulation of the milk, and the fubfequent formation of matter in the breafts is a difeafe attended with fo much pain, and frequently of fo long duration, that health is often impaired by it*. It is a very difagreeable thing to fee a woman labouring for feveral months under a teasing and painful diforder, which for the moft part may be prevented, or the duration of which may at leaft be confiderably fhortened. The confideration of thefe circumftances,

* Abfcefles of the breafts are a long and painful difeafe, long in forming, and long in curing. Aftuc on the Difcafes of Women. Book IV. chap. iv. p. 323.

led me to turn my thoughts upon finding a more expeditious mode of treating these complaints. On looking over my manuscript papers, I found in some notes taken from the late Doctor Didier's † lectures on the *Materia Medica*, that salt ammoniac dissolved in Hungary-water, was said to possess the property of keeping the milk fluid. I determined to make the experiment the first opportunity. In the mean while I tried how much salt ammoniac a given quantity of Hungary water would dissolve, and found that water alone took up a much larger quantity of the salt, and kept it suspended better than the spirit. Supposing that the virtue of the application resided chiefly in the salt, upon the first occasion I used it in the follow-

† As I have occasion to mention that gentleman's name, I cannot avoid paying a tribute to the memory of genius, industry, and a number of amiable virtues, which he possessed in an eminent degree. His premature and much lamented death deprived society of one of its most valuable members, and the profession of one of its best ornaments

ing manner. I directed three ounces of salt ammoniac to be dissolved in a pint of common water, to which an equal quantity of Hungary water was added. Rags dipped in this liquor made a little warm, were applied to the whole surface of the breast. These rags were wetted again as often as they became dry. The first case I tried this application in, was a coagulation of the milk soon after lying-in, before any suppuration had been formed. I soon found the confirmation of Doctor Didier's assertion, that this solution had the property of keeping the milk fluid, for after it had been applied a few hours, the grumous feel was dispersed and the breast restored to its natural state, while the milk flowed freely from the nipple.

I tried the same method in a great number of cases where I was called in before the suppuration was formed, and never yet knew it fail. Among others, Mrs. H——, who had suffered so much from one of these complaints,

plaints, and whose case stands the second in the second part of this work, was brought to bed about a year after I had first attended her. Her husband having received a violent bruise on the ankle, sent to consult me. The first day I saw him happened to be the day after she had been delivered. I found her very much alarmed, and dreading the former sufferings she had gone through; for her breasts were now as much swelled and painful as they had been at her preceding lying-in. I directed her to apply the solution of salt ammoniac in water, and Hungary water, as mentioned above, and when I saw her the next day she was perfectly free from pain, and the coagulation dispersed. She continued the application, however, at my desire for a couple of days, and had no return of the complaint. The circumstance of this swelling yielding so readily to the solution of salt ammoniac, which produced no effect on the former swelling in the same patient *, seems to

* See the description of this case in pages 123, 124, and 125 of this work.

establish the difference between these two complaints, and to shew that the former was beginning to degenerate into a schirrhous tumour. But there was one case of the milk breast in which this method was tried, and which was of so remarkable a nature, that I hope the reader will not think I trespass upon his patience in giving an account of it.

In the year 1776 Joseph Smith, servant to the Duke of Montague, desired me to visit his wife, who, he said, had a bad breast. I went immediately, and found that having been brought to bed the preceding day, she was seized with a coagulation of the milk of such a kind as I never saw before. The size of the breast was immense, the pain to the highest degree excruciating, the glands under the arm-pit swelled, and in a word, the whole disease so violent that she was unable to move the arm on that side. Her pulse was at the same time very low, she having suffered much at her delivery. I was alarmed at the
 sight,

fight, for I had never beheld a breast of such a prodigious volume. Thinking it necessary from the intenseness of the pain in this case to join an anodine with the ordinary solution, I wrote the following prescription :

R: Capit: papaver: contusor: No: XII

Flor: sambuc: manip: ij. Coque in aq:

Fontanæ lbiss usque ad lbi: In colato liquore

Solve sal: ammon: cr: ʒij. deinde adde

Camphor: in spirit: vin: solut: ʒss.

When this point of liquid came I directed it to be mixed with a pint of brandy, and then to be applied warm by cloths dipt into it over all the breast, the arm-pit, and the arm itself, which was much distended. I directed also that the cloths should be attentively wetted again with the warm liquor as often as they became dry. When I called upon her, the next day, she told me she had felt much ease in six hours after the application. The swelling was now considerably diminished, the

pain almost gone, and the arm restored to its functions. In less than three days the breast was reduced to its natural size, and the complaint entirely dissipated. I advised her to continue the application for a few days, lest she should have a relapse, which, however, she never had.

It is impossible to say what would have been the event of this case had the breast advanced to suppuration ; but from the uncommon distension of the part, the excruciating torture that was the consequence of it, and the weak state of the patient, it is probable she would have sunk under a disease, which is not supposed to be attended with any kind of danger.

Thus far we have been speaking of the unsuppurated state of the milk breast, it now remains to consider what is to be done when matter is already formed, in which state it most frequently comes under our inspection. For though the disease be in general slow in
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its progress, yet the first formation of matter is often made very quickly and suddenly. It has already been observed that in the ordinary mode of treating these milk breasts with bread and milk poultices, it frequently happens that the suppuration is renewed once a fortnight, once a month, or once in six weeks for several months together, with great pain and inconvenience to the patient. Now, although the solution of salt ammoniac will not cause the reabsorption of matter when once it is formed, yet it will prevent its forming a second time, when it is once let out. I have tried this in a very great number of cases, and never knew it fail but once; so that the milk breasts treated in this manner do not last more than three weeks, one month, or six weeks at farthest, while the others frequently continue for several months, and sometimes in the end leave remains of induration behind them. In the one case where this method failed, the patient was labouring
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the whole time under a febrile affection, but even in this instance the complaint did not last more than three months. Two sisters, living next door to each other, and lying-in nearly at the same time, were both affected with a coagulation of the milk. These cases both advanced to suppuration. One of these ladies had previously applied to me on account of a schirrhous tumour, the other had no disease in her breast. The former was under my care, and treated with the solution of salt ammoniac; the latter was treated with bread and milk poultices. The first was well within the month, the last remained ill, as I was informed, for four months. These observations appear to establish the advantage of the solution of salt ammoniac above that of the bread and milk cataplasm in these cases. What good, indeed, are we to expect from the latter application in these complaints? It is used as an emollient, to relax the parts and ease the pain. But I fear this relaxation produces

duces more mischief than it does good. The vessels are already too much distended by the influx of milk; the application which really does relax and keep them open, exposes them to a greater influx of milk without appearing to have any effect upon the contents that are already clotted. Besides, is it not probable that as the poultice becomes dry the milk itself may be absorbed from it into the vessels already distended, and thereby add to the coagulation? The solution of salt ammoniac, on the contrary, even if it should not possess the property here ascribed to it of keeping the milk fluid, yet being mixt with spirit, which adds to its own astringency, it is more likely to be advantageous in this case from that very quality. For if the sides of the distended vessels be contracted by the power of any astringent application, they will not only be more disposed to resist the further accumulation of any fluid, but their diameters being lessened, and their coats squeezed, and compelled

pelled to act upon their contents; these contents will be driven back into those vessels where the circulation is still free, and where the constant motion will soon break down and comminute the grumous clots. This is, perhaps, the reason why many inflammations, and particularly of the erysipelatose kind, which have long resisted all emollient applications, will soon yield to that of spirit of wine and camphire. This is, perhaps, the reason why the same application, if applied immediately after a scald, will frequently prevent the vesication of the skin, by contracting the vessels and resisting the impulse of the distending fluids; and it is probably for the same reason that spirit of wine and camphire, if timely applied to superficial whitloes, instead of a bread and milk poultice, as is usually practised, will effectually prevent the formation of matter. I shall observe, by the way, that a bread and milk poultice in these cases seems likely to protract the disease. For

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when the matter is once formed, though ever in so small a quantity, if it can find a vent through the cuticle, the disease is soon terminated. But at the end of the fingers, where this whitloe is generally formed, the cuticle is naturally very thick, and therefore opposes a strong obstacle to the issue of the matter. The bread and milk poultice, therefore, by keeping the part constantly sodden in moisture must necessarily increase the thickness of the cuticle, and thereby prevent the effect it was intended to forward. This is very evident from the aspect of the skin after having been wrapped up in a bread and milk poultice, for it appears white, compact and corrugated, like the fingers of a washerwoman, who has had her hands all day in the suds. When we come to open it with a lancet we also frequently find it enormously increased in thickness, which circumstance may be partly owing to the inflammation, partly to the constant moisture of the application. This
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thickning of the cuticle, which prevents the matter from finding its way outwards, makes it spread itself round in every direction, and renders the disease much more extensive and troublesome than it would otherwise be. On the contrary, when it has appeared to me that matter has been already collected in a superficial whitloe, I have often, by puncturing the cuticle, or separating the lamellæ of it with a lancet, given vent to a drop or two of pus; and have thus put a speedy end to a disease, which if this had not been done, might have proved very painful and tedious.

In confirmation of this doctrine, I shall just mention, that a lady, to whose family I am related, being very frequently troubled with superficial whitloes, which were sometimes extremely irksome to her, once asked me if there were no way of preventing these collections of matter. I advised her as soon as she felt pain or throbbing in any of her fingers,

fingers, so as to make her suspect that the disease was coming on, to dip a piece of rag in camphorated spirit of wine, and apply it with a moderate degree of pressure round the affected part. She followed the advice, and has never had a whitloe in her finger since.

But to return to the milk breast, there is one circumstance more to be considered with regard to this complaint, and that is, whether it be best to suffer the abscess when formed to break of itself or to open it with a lancet. For my own part, experience has determined me in favour of the latter method, and for the following reasons: when abscesses in any part are near the skin and preparing to burst through it, the distension the inflamed skin suffers at this time is extremely painful, and this natural vent may be obstructed from many reasons which we can not account for. To make a small opening with a lancet, when the skin is thin, seems to me to save the patient

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tient four and twenty, if not eight and forty hours of excruciating pain. Besides, the opening with the lancet however small, is still larger than that which is made by the spontaneous bursting of the matter. Accordingly, we see that nature sometimes makes way for the matter by five or six different openings; and seems thus to point out to us what is most proper to be done. It appears, therefore, that a small opening with a lancet, beside that it will save the patient some hours pain, will also be more likely to prevent a fresh suppuration by affording a more ample vent to the matter.

THE END.